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## Re-Thinking the Intentionality of Fraud: Constructing and Testing the Theory of Unintended Amoral Behavior to Explain Fraudulent Financial Reporting

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RE-THINKING THE INTENTIONALITY OF FRAUD: CONSTRUCTING AND TESTING  
THE THEORY OF UNINTENDED AMORAL BEHAVIOR TO EXPLAIN FRAUDULENT  
FINANCIAL REPORTING.

by

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## ABSTRACT

My three-paper dissertation is aimed at applying the concepts of bounded ethicality and ethical fading to accounting fraud. Typical of relatively new fields such as behavioral ethics, theoretical models are scarce (Tenbrunsel & Smith-Crowe, 2008). As such, the purpose of Study 1 is to unify disparate theories and ideas from psychology and behavioral ethics as a means of constructing a theory, the Theory of Unintended Amoral Behavior (TUAB), which includes the concepts of bounded ethicality and ethical fading. In addition, the pressure for management to meet earnings expectations is discussed through the lens of the TUAB as an example of how one may unknowingly misreport.

Studies 2 and 3 apply the TUAB to investigate how certain contextual factors interact with egocentric biases to increase the likelihood of ethical fading. Specifically, Study 2 consists of an experiment exploring how inferior pay among managers interacts with egocentric perceptions of fairness and envy to affect the likelihood of one engaging in ethical fading and fraudulent behavior. Study 3 also utilizes an experimental methodology to examine how the pressure to meet earnings forecasts interacts with egocentric perceptions of fairness and negative affect to influence the probability of ethical fading and fraudulent acts.

The results for Study 2 indicate that one who is paid at a lower rate is more likely to view this disparity as unfair, which leads to a greater feeling of envy. Although envy had no significant direct effect on ethical fading in the primary analyses, a supplemental analysis revealed that a person's risk preference might moderate this relationship. The primary findings of Study 2 suggest that individuals who experience a higher degree of ethical fading are more likely to commit fraud, and that ethical fading, along with perceived unfairness, seem to be significant

psychological processes that explain how differences in pay may lead to fraud. The primary finding of Study 3 is that, like Study 2, fraud is more likely to occur as an individual experiences a higher degree of ethical fading. Furthermore, this study suggests that those who are closest to meeting an earnings target are the most likely to engage in fraudulent behavior. Finally, the results failed to find any support that one's egocentric perceptions of fairness and negative affect contribute towards his or her ethical behavior in a goal achievement setting. The primary contributions of this dissertation is that it unifies various theories and ideas from psychology and behavioral ethics to establish a testable theory (TUAB) that includes the concepts of bounded ethicality and ethical fading, serves as an initial test of TUAB, and provides evidence that unethical behavior is not necessarily the result of one consciously forsaking his or her ethics for some other desired goal (i.e., profit).

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## CHAPTER 1: INTRODUCTION

Financial statement fraud affects not only organizations, employees, investors, and audit firms, but society as well. In the most recent survey among its members, the Association of Certified Fraud Examiners (ACFE) reports that the median loss among organizations that have committed fraud was approximately \$1 million (ACFE, 2012). These costs may include legal expenditures, fines, disgorgements, increased insurance rates, and loss of productivity (Wells, 2010). The losses associated with an organization's stock value are perhaps more noteworthy. One estimate indicates that the decrease in the market value of a company's stock can be anywhere from 500 to 1000 times the amount of a fraud (Hall, 2005). For example, a \$7 million fraud may result in a \$3.5 billion to \$7 billion decrease in stock value. Furthermore, an organization may be subject to the risk of having its stock involuntarily delisted from exchanges. There are also those costs that are immeasurable. An organization that is involved in financial statement fraud may adversely affect the morale of its employees, the goodwill of its customers, and the trust of its suppliers (Wells, 2010). The most significant penalty an organization can pay for fraud, though, is a decline into bankruptcy that can ultimately lead to the liquidation of the company.

Accounting fraud is especially harmful to investors in that it makes the capital markets either, at a minimum, less efficient (Wells, 2010) or, at worst, unstable. For example, the actions of just WorldCom, Qwest, Global Crossing, Tyco, and Enron together accounted for \$460 billion in shareholder losses (Cotton, 2002). A more difficult cost to estimate, however, is the diminished confidence in the capital markets when the quality, transparency, integrity, and reliability of both the financial reporting process and financial information, in general, becomes

suspect (Wells, 2010). Mistrust of the capital markets and the financial reporting process on which it rests impinges upon the integrity of the auditing profession as well.

The reputation of the auditing profession as a whole suffers when firms, through either obliviousness, negligence, or turning a blind-eye, provided a clean opinion on fraudulent financial statements. Instances of fraud, especially when several, high profile companies are accused in a relatively short period, create doubt in the effectiveness of auditors and the audit process. As such fraud invites government oversight (e.g., the Public Company Accounting Oversight Board) and regulation (e.g., the Sarbanes-Oxley Act), which can be costly for the auditing profession in regards to lobbying and/or compliance expenditures. Individual accounting firms may also endure more direct, tangible costs as result of the fraudulent actions of their clients. At a minimum, the cost to perform an audit may rise if the firm's tests for fraud indicate that procedures that are more extensive should be used due to an increased probability of its client misrepresenting financial information. More significant, however, are the legal costs a firm can incur if it provided a clean opinion on financial statements that were, in fact, fraudulent. The fate of Arthur Anderson is an example of an extreme price an auditing firm can pay for its dishonest clients.

Financial statement fraud, however, is not just an organizational, employee, investor, or auditing issue, or even a problem confined with the business realm, it is a societal issue given its impact on all of the public. At an individual level, accounting fraud can destroy careers, fuel massive job loss (Wells, 2010), and, in the case of Enron, erase one's entire retirement savings (Oppel, 2001). At a societal level, it can negatively impact the nation's prosperity and economic growth (Wells, 2010). Thus, given its enormous costs, fraud has received considerable attention

among regulators, organizations, audit firms, and researchers. Yet, efforts aimed at deterring such malfeasance have yielded minimal success.

Incidents of accounting fraud have increased over the past decade (PricewaterhouseCoopers, 2011) despite the considerable legislative measures aimed at its deterrence, such as the passage of the Sarbanes-Oxley Act of 2002 (SOX). One factor that might explain the ineffectiveness of these measures is their reliance on basic, yet inaccurate, assumptions regarding the decision-making that underlies fraudulent behavior. Specifically, that this behavior is (1) motivated by greed, or some other basic emotion, and (2) the result of a conscious decision to forsake one's morals for some other desire good (i.e., satisfying the person's greed). However, greed seems to be an overly simplistic explanation in that there are many "aggressively acquisitive" individuals who do not engage in fraud (Duffield & Grabosky, 2001). Furthermore, in regards to the conceptualization of fraud as a self-interested, intentional act, Moore, Tanlu, and Bazerman (2010) argue that "if self-interest were computed rationally as an expected value and it then drove motivated reasoning, eliminating bias would be as simple as increasing the criminal penalties for fraud" (p. 46).

Rather than "predatory fraudsters" who enrich themselves by exploiting weak accounting controls, the evidence suggests that "accidental fraudsters" constitute a larger share of frauds. The characteristics of an accidental fraudster are that he or she is a decent, law-abiding person who, under typical circumstances, would have never considered committing fraud (Dorminey, Fleming, Kranacher, & Riley, 2012). Data from the Association of Certified Fraud Examiners (2012) indicates that most fraudsters fit such a description in that they are trusted employees with clean employment histories and no prior criminal offenses. Charles Niemeier, the former chief

accountant for the SEC's enforcement division, states that "[p]eople who never intend to do something wrong end up finding themselves in situations where they are almost forced to continue to commit fraud once they have started doing this. Otherwise, it will be revealed that they had used improper accounting in the earlier periods" (quoted from Bazerman, Loewenstein, & Moore, 2002, p. 100). As such, understanding why managers commit fraud perhaps requires a more nuanced examination into their psychological processes that drive ethical decision-making.

Diverging from the traditional frameworks (e.g., Kohlberg, 1973; Rest, 1986) that view ethical decision-making as a rational, linear thought process, Chugh, Bazerman, and Banaji (2005) formulated the concept of bounded ethicality. Bounded ethicality is defined as the "systematic and predictable psychological processes that lead people to engage in ethically questionable behaviors that are inconsistent with their own preferred ethics" (Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2010, p. 7). These processes consist of inherent biases and heuristics that impede a person's ability to make an ethical decision (Chugh, Bazerman, Banaji, 2005). Implicit forms of prejudice, in-group favoritism, and a tendency to overclaim credit are distinct examples of biases that behavioral ethics researchers have identified and used to portray the role of bounded ethicality in decision-making (Banaji, Bazerman, & Chugh, 2003; Bazerman, 2011). As these psychological processes operate at a subconscious level (Gino, Moore, & Bazerman, 2011), the most sinister characteristic of bounded ethicality is that it allows the person to violate his or her morals without the awareness that he or she is doing so.

The lack of awareness that one is behaving unethically is accomplished through the mechanism of ethical fading wherein the person's psychological constraints fade any moral considerations from his or her decision-making process (Tenbrunsel & Messick, 2004). Studies



suggest that environmental factors such as sanctioning systems (Tenbrunsel & Messick, 1999) and goal setting (Schweitzer, Ordóñez, & Douma, 2004) can induce ethical fading in an individual (Tenbrunsel et al., 2010). In the accounting ethics literature, Murphy and Dacin (2011) argue that contextual elements such as the pressure to meet analyst expectations may influence managers to engage in financial statement fraud without the consideration that they are behaving unethically. As such, research with the goal of identifying the contextual factors that lead to ethical fading, as well as the psychological processes that trigger this operation, can contribute towards implementing measures that are more effective at deterring accounting fraud.

This dissertation is aimed at applying the concepts of bounded ethicality and ethical fading to accounting fraud. However, common to relatively new fields such as behavioral ethics, theoretical models are nebulous and thus not well-defined (Tenbrunsel & Smith-Crowe, 2008). As such, the purpose of Study 1 (Chapter 2) is to unify disparate theories and ideas from psychology and behavioral ethics as a means of constructing a theory, the Theory of Unintended Amoral Behavior (TUAB), which includes the concepts of bounded ethicality and ethical fading. Studies 2 and 3 (Chapters 3 and 4, respectively) apply TUAB (Chapter 2) to investigate how certain contextual factors interact with egocentric biases to increase the likelihood of ethical fading. Specifically, Study 2 consists of an experiment exploring how unequal pay among managers provokes egocentric perceptions of fairness and envy which, in turn, increases the likelihood of one engaging in ethical fading and fraudulent behavior. Study 3 also utilizes an experimental methodology to examine how the pressure to meet earnings forecasts trigger egocentric perceptions of fairness and negative affect to influence the probability of ethical fading and fraud. If bounded ethicality and ethical fading help to explain accounting fraud, then

research such as this can have significant implications as to how regulators, executives, and auditors address this problem. What follows are brief overviews of the three studies as well as a discussion regarding the overall contributions of this dissertation.

### Overview of Study 1

The purpose of Study 1 is to unify disparate theories and ideas from psychology and behavioral ethics as a means of constructing a theory, the Theory of Unintended Amoral Behavior (TUAB), which includes the concepts of bounded ethicality and ethical fading. The pressure for management to meet earnings expectations is discussed through the lens of TUAB as an example of how one may unknowingly engage in unethical behavior.

In sum, TUAB (Chapter 2) states that quasi-static and task-specific factors can trigger certain biases and heuristics. Provoking those biases related to preserving one's self-image, in particular, can lead to a distorted interpretation of stimuli that favor a preferred outcome (Messick & Sentis, 1983). These effortless and automatic evaluations are so primitive that they may not feel biased or distorted in any way (Bazerman & Banaji, 2004). Furthermore, the triggering of these biases can produce negative affect, for which the person will be motivated to pacify these emotions quickly and without utilizing a deliberate thought process (Kahneman, 2011). Thus, if engaging in a questionable behavior eliminates any negative affect, then the individual's affect-laden intuition will suggest that such behavior is "good" or "appropriate" in that it is the most emotionally satisfying. At this point, the person is likely to rely on an "affect heuristic" wherein the negative emotions serve as the basis for his or her decision. The individual is then likely to perform an act of substitution wherein a difficult question (what is the ethical or

proper action?) is replaced with an easier one (would this decision make me feel better?). Ethical fading has now occurred since the moral implications of the alternative decisions are not considered, thus increasing the probability that the person behaves unethically.

Study 1 also discusses TUAB's (Chapter 2) potential to predict and/or explain immoral behavior across the different functional areas of accounting research. In regards to Financial Accounting research, TUAB (Chapter 2) may explain how disclosures and ambiguity in the reporting standards (e.g., principle-based guidelines) can actually encourage unethical behavior. With respect to the AIS area, the TUAB (Chapter 2) can be utilized to address whether information systems foster an environment of instrumental rationality. That is, a focus on the process for completing a task in the most effective and efficient way without any consideration of the ethical implications of engaging in that process. The TUAB (Chapter 2) can also be used to explain how and why auditors sometimes forfeit their professional responsibilities and accede to their clients' demands. In addition, TUAB (Chapter 2) may help explain how and why taxpayers and tax practitioners are willing to engage in behaviors related to tax avoidance and tax fraud. Finally, in regards to the Management Accounting area, TUAB (Chapter 2) may help explain a range of deviant behaviors such as the misappropriation of assets, bribery, and transfer price manipulation and can be used to explore the ethical and quasi-ethical issues related to budgeting and performance measurement such as dishonesty in budget reporting, the creation of budgetary slack, biased performance evaluation, and performance measurement manipulation.

The primary contribution of Study 1 is that it unifies various theories and ideas from psychology and behavioral ethics to establish a testable theory that includes the concepts of bounded ethicality and ethical fading. Furthermore, Study 1 contributes to the ethics and

accounting literatures by introducing a model that makes a distinction between intentional and unintentional behavior by allowing for the systematic, psychological errors that constrain one's ability to make an ethical decision, as well as the contextual factors that exacerbate those errors. This study also offers potential contributions to auditors, management, and regulators.

An understanding of how certain contextual factors contribute towards bounded ethicality may result in improved fraud detection in the auditing profession. In addition, knowledge of those inherent biases that impair ethical decision-making can improve auditors' defense against ethical fading, making them less likely to relinquish their professional responsibilities and accede to their clients' demands. Furthermore, given the subconscious nature of ethical fading, TUAB (Chapter 2) suggests that auditors should reconsider the substantial weight they attach to a manager's attitude and character when evaluating fraud risk. In regards to managers and organizations, knowledge of bounded ethicality may allow companies to implement controls that are more effective at preventing ethical fading. In addition, familiarity with those process that constrain ethical decision-making can help psychologically prepare CEOs and CFOs for when they are confronted with opportunities to engage in accounting fraud or some other type of unethical behavior. Finally, Study 1 suggests that regulators acknowledge the difference between intentional corruption and unintentional bias, and the environmental factors that drive such bias, if they are to draft laws and regulations that are more effective at deterring fraud or other types of unethical behavior.

## Overview of Study 2

The purpose of Study 2 is to examine how a particular contextual factor, inferior pay among managers, provokes egocentric perceptions of unfairness and envy to influence the likelihood of one engaging in ethical fading and fraudulent behavior. Researchers have started to investigate CEO reactions to their pay relative to others in the same labor market (Fong, 2010). Fong (2010), citing Porac, Wade, and Pollack (1999), explains that “the complex causes of organizational outcomes can motivate, or even necessitate, social comparisons by CEOs and thus they could recognize the going labor market rate for their services and possible deviations from such rates” (p. 1099). As such, an executive whose compensation is relatively lower than other CEOs may perceive this as a threat to his or her competency given that pay structure is considered to be reflection of one’s importance and managerial abilities (March, 1984). This perceived threat may motivate the manager to behave in ways that can lead to higher pay (Fong, 2010).

Gino and Pierce (2009) contend that envy towards wealthy targets increases the likelihood that a person will engage in unethical behavior to reduce any inequality resulting from those differences in wealth. The results of their study suggest that abundant wealth creates perceptions of inequity in individuals who function in environments where such abundance is present. Moreover, Gino and Pierce’s (2009) findings indicate that those perceptions drive feelings of envy, which, in turn, provokes unethical behavior. Their theoretical argument, and its empirical support, can be explained by the concepts of bounded ethicality and ethical fading. Furthermore, Gino and Pierce (2009) argue that their findings can be generalized to fraudulent behavior. Thus, given that average CEO pay continues to skyrocket, logic would dictate that

managers who earn less than their peers may be more likely to succumb to ethical fading and, as a result, commit fraud.

Study 2 utilizes TUAB (Chapter 2) to predict that a manager who compares his or her pay to a higher-paid referent will view the discrepancy as more unfair as opposed to a manager who compares his or her earnings to a lower-paid referent. Furthermore, it is hypothesized that this perception will create a feeling of envy, which will subsequently increase the probability of ethical fading, and thus fraudulent behavior, in the manager who is paid less. The hypotheses were tested using a 1 x 2, between-participants design wherein the participants were asked to sell assets of given values (ranging from excellent to poor) to a computerized buyer. The manipulated variable was pay rate, where one group (high-pay rate) earned more money from each successful transaction than the other (low-pay rate). Before each attempted sale, the participants had the option to change (i.e., misrepresent) the asset's value from what was initially provided. Intrinsically, there existed an incentive for the participant to misrepresent low quality assets as high since selling assets disclosed at higher qualities would have resulted in larger payouts. The participants' egocentric perceptions of unfairness, episodic envy, ethical fading, and rate of misrepresentation were measured during the experiment.

The findings indicate that a person who is paid at a lower rate is more likely to perceive this disparity as unfair, which leads to a feeling of envy. Envy, however, had no significant direct effect on ethical fading in the primary analyses, but a supplemental analysis suggests that one's risk preference may moderate this relationship. The primary results of this study, although somewhat mixed, suggest that individuals who cede to ethical fading are more likely to engage in

fraud, and that ethical fading, along with perceived unfairness, are significant psychological processes that explain how differences in compensation can induce fraud.

The main contributions of Study 2 are that it both provides initial support of TUAB (Chapter 2) and identifies a contextual factor that can impair one's ability to act ethically. In addition, Study 2 presents evidence that the decision to engage in fraud is not necessarily the result of one consciously forsaking his or her morals for some other desired goal (e.g., profit). Finally, the supplemental analysis in this study suggests that future research using TUAB (Chapter 2) should consider how individual characteristics (e.g., personality traits) might affect the processes proposed in the model.

### Overview of Study 3

The purpose of Study 3 is to examine how the pressure to meet earnings forecasts may trigger psychological processes that, in turn, influence the likelihood of a manager engaging in ethical fading and fraudulent behavior. Wyatt (2004) argues that the ambiguous nature of some FASB standards allow for "gaming the system" (p. 52). Supporting this claim, Xu, Taylor, and Dugan's (2007) review of the earnings management literature states that managers do, in fact, "take advantage of the accounting discretion in GAAP to manipulate accruals through accounting choices and estimates" (p. 195). Given the line drawn between "clever earnings management" and outright fraud is not necessarily distinct, a manager can become too aggressive in meeting earnings targets and, according to Murphy and Dacin (2011), commit fraud without the awareness that he or she is behaving unethically. Why some managers may unknowingly

commit fraud in order to meet earnings expectations can perhaps be attributed to the effects of bounded ethicality and ethical fading.

Study 3 utilizes TUAB (Chapter 2) to hypothesize that a manager who falls below an earnings target will engineer the egocentric perspective that he or she did not reach the goal because of unfair circumstances. In addition, Study 3 predicts that this egocentric perspective will generate a general negative affect, which will subsequently increase the likelihood of ethical fading, and thus fraudulent behavior, in the manager who falls below earnings targets. Finally, this study hypothesizes that an individual who is close to, yet still below, a target is more likely to commit fraud than either one who has already surpassed it or one who is more distant from that goal. Two experiments utilizing an asset-selling task similar to Study 2 were conducted to test the predictions. In both experiments, participants were advised that they could earn a bonus if a particular earnings target was reached based on their performance in the asset-selling task. In Experiment 1, the independent variable was whether the participant, who was given one of three earnings goals (i.e., hard, moderate, easy), had reached his or her respective goal before the final round. Experiment 2 consisted of a 1 x 3 design where the independent, manipulated variable was the participant's proximity to the earnings target (i.e., reached, near, or far) after the penultimate round of the asset-selling task. The participants' egocentric perceptions, negative affect, ethical fading, and fraudulent behavior were measured and/or observed across the two experiments.

Similar to Study 2, the primary findings of this study, albeit mixed, suggest that fraud is more likely to occur as an individual experiences a higher degree of ethical fading. Furthermore, the results from Study 3 indicate that those people who are closest to meeting an earnings target



possess the highest probability of engaging in fraudulent behavior. However, the results of this study did not support the predictions that an individual's egocentric perceptions of fairness and negative affect influence his or her ethical behavior in a goal achievement setting.

The main contributions of Study 3 are that it identifies a psychological process suggested by bounded ethicality that constrains one's ability to make an ethical decision in addition to an important contextual element that triggers this process. That is, the pressure to meet earnings targets can influence a manager to engage in fraudulent behavior through the mechanism of ethical fading. As such, Study 3 provides additional evidence that the decision to commit fraud is not necessarily a deliberate trade-off between ethics and some other desired goal.

### Overall Contributions

The dissertation provides three important contributions to the accounting and ethics literatures. The first contribution is that it consolidates disparate, but related, theories and concepts from psychology and behavioral ethics to establish a testable theory (TUAB) that includes the concepts of bounded ethicality and ethical fading. As discussed in Study 1, TUAB (Chapter 2) has the potential to predict and/or explain unethical behavior across the different functional areas of accounting research. Furthermore, this dissertation extends the work of Murphy and Dacin's (2011) framework that identifies the psychological pathways an individual may follow when making the decision to engage in fraud. They contend that contextual factors (e.g., the pressure to meet analysts' forecasts) may compel a manager to unintentionally engage in fraudulent behavior. This dissertation offers a more detailed understanding of this phenomenon through its inclusion of the bounded ethicality and ethical fading concepts. The

second contribution of this dissertation is that it serves as an initial test of, and support for, TUAB. In particular, it provides evidence that, through the mechanism of ethical fading, unethical behavior is not necessarily the result of one consciously forsaking his or her ethics for some other desired goal (i.e., profit). Finally, this dissertation identifies some of the psychological processes suggested by bounded ethicality that limit one's ability to make an ethical decision as well as two important contextual factors (i.e., pay inequities and earnings targets) that provokes those processes.

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## **CHAPTER 2: THEORY OF UNINTENDED AMORAL BEHAVIOR: THE EFFECT OF BOUNDED ETHICALITY ON MANAGERIAL DECISION-MAKING UNDER SYSTEM 1 AND SYSTEM 2 THINKING (STUDY 1)**

### Introduction

Bazerman and Tenbrunsel (2011) note that unethical behavior within organizations appears to be on the rise despite a considerable amount of effort, time, and money expended to discourage such conduct. Instances of financial statement fraud support this general observation. In 2002, Congress passed the Sarbanes-Oxley Act (SOX) in order to restore the public's trust in capital markets that had eroded because of an outbreak of fraud in the late 1990s and early 2000s. SOX, with deterring and preventing fraud as its chief objectives, sought to enhance regulations regarding internal controls, financial disclosure, corporate governance, and auditor independence. As such, this legislation initiated profound changes to the U.S. financial reporting system, especially with respect to management's responsibility over financial reporting.

A provision embedded within SOX requires both the CEO and CFO to certify that the company's financial statements and disclosures accurately represent the economic condition of their organization and imposes severe criminal penalties and fines for those who knowingly sign-off on fraudulent information. However, despite SOX's rigorous rules, penalties, and fines, along with the other concerted endeavors to improve corporate behavior, incidents of financial statement fraud seem to be rising, worldwide. PricewaterhouseCoopers's latest biennial report on global economic crime shows the percentage of surveyed participants (members within an organization) who experienced accounting fraud within a twelve-month period has increased from 10 percent in 2003 to 24 percent in 2011 (PricewaterhouseCoopers, 2011). One possible

reason that explains SOX's inability to curtail fraud is the law's reliance on a flawed assumption about unethical behavior in general. That is, unethical behavior is a result of one intentionally sacrificing his or her ethics for some other desired goal (e.g., meeting analysts' expectations).

The psychological explanation for fraud, at first, appears simple. That is, greed motivates a dishonest individual to misreport. However, this seems to be too simplistic of an explanation as there are many dishonest and "aggressively acquisitive" people who are law abiding and never commit fraud (Duffield & Grabosky, 2001). Understanding why managers engage in fraud may require a more nuanced investigation into the manager's psychological processes that are involved in decision-making. In particular, those inherent biases and heuristics aimed at preserving one's sense of self-worth that, when activated, may constrain his or her ability to make an ethical decision. As such, the purpose of this chapter is to unify disparate theories and ideas from psychology and behavioral ethics as a means of constructing a theory, the Theory of Unintended Amoral Behavior (hereafter, TUAB), that explains how certain psychological processes may direct a person to unintentionally engage in fraudulent financial reporting through ethical fading, a mechanism that strips ethical considerations from decision-making (Tenbrunsel & Messick, 2004).

Rather than the "predator" fraudster who is greedy and opportunistic, evidence indicates that fraud is usually perpetrated by the "accidental fraudster." The accidental fraudster is one who is generally considered a decent, law-abiding citizen that, under normal circumstances, would have never contemplated engaging in accounting fraud (Dorminey, Fleming, Kranacher, & Riley, 2012). Data from the Association of Certified Fraud Examiners, (ACFE, 2012) reveals that most fraudsters fit this description in that they are typically trusted employees who are first-



time offenders and have clean employment histories. Anecdotally, Charles Niemeier, former chief accountant for the enforcement division of the Securities and Exchange Commission (SEC), stated that "[p]eople who never intend to do something wrong end up finding themselves in situations where they are almost forced to continue to commit fraud once they have started doing this. Otherwise, it will be revealed that they had used improper accounting in the earlier periods" (quoted from Bazerman, Loewenstein, & Moore, 2002, p. 100). These comments suggest that initial acts of fraud may be unintentional. However, SOX, as well as most laws, definitions, and concepts regarding fraud, assume that such behavior is intentional. An understating of the psychological mechanisms that limit one's ethical decision-making, referred to as bounded ethicality, may thus offer potential contributions to auditors, management, regulators, and researchers in regards to how each address fraudulent financial reporting.

With respect to the auditing profession, an understanding of how certain contextual factors contribute towards bounded ethicality may result in improved fraud detection. In addition, given the subconscious nature of ethical fading, TUAB suggests that auditors might reconsider the substantial weight they attach to management's character and attitude when conducting fraud risk assessments. In regards to organizations and managers, knowledge of bounded ethicality may allow organizations to design superior fraud controls aimed at mitigating the contextual factors that influence ethical fading. Furthermore, understanding one's own biases and heuristics may help CEOs and CFOs be more psychologically prepared when confronted with opportunities to engage in accounting fraud. This chapter suggests to regulators that recognizing the difference between intentional corruption and unintentional bias, and the factors that drive such bias, is needed to establish more effective fraud deterrents. Finally, this chapter

contributes to the ethics and accounting literatures by introducing a model that distinguishes between intentional and unintentional behavior by considering the systematic, psychological errors that constrain one's ability to make an ethical decision, as well as the contextual factors that exacerbate those errors.

The remainder of this chapter is organized as follows. Section 2 constructs and describes a model of bounded ethicality in addition to providing background information on the current gaps in accounting research. Section 3 articulates TUAB's implications to the accounting literature by discussing future avenues of research that may utilize this theory. Finally, Section 4 provides a detailed examination of the chapter's contributions.

### Background and Theoretical Model

Cressey's (1950, 1953) Fraud Triangle assists with understanding the accidental fraudster (Dorminey et al., 2012). Initially proposed to explain embezzlement, this framework was later expanded by both researchers and regulators to include fraudulent financial reporting (Trompeter, Carpenter, Desai, Jones, & Riley, 2013). According to the Fraud Triangle, three conditions are typically present when fraud occurs. First, the individual has an incentive or perceives a pressure to commit fraud. The second condition is that weak internal controls (which include management's ability to override controls) must be present to provide the opportunity for one to engage in the act. Finally, the individual must be able to either rationalize the fraud to be consistent with his or her moral principles or possess some attitude, ethical principle, or character trait that allows that person to knowingly and intentionally commit a fraudulent act (Ramos, 2003).

The Fraud Triangle has also been utilized by researchers as both theoretical support (e.g., Murphy, 2012) and a means of organizing the literature related to fraud (e.g., Trompeter et al., 2013). Much of the accounting research, however, has focused on the incentives/pressures and opportunities elements of the Fraud Triangle while the rationalization component has received the least amount of consideration (Hogan, Rezaee, Riley, & Velury, 2008; Murphy & Dacin, 2011; Trompeter et al., 2013; Wells, 2004). As such, there is a dearth of research regarding the psychological processes that enable a manager to justify fraudulent action. In addition, we have limited knowledge of how contextual factors, such as semi-static environmental influences (e.g., one's corporate culture) and situation-specific considerations (e.g., time pressure), interact to affect how a person rationalizes. Recent research on bounded ethicality and ethical fading provides a foundation for explaining how psychological processes, specifically, common biases and heuristics, can limit one's ability to recognize a situation as having ethical implications, thus allowing that person to act against his or her moral code.

Embedded in laws such as SOX is the common supposition that unethical behavior is the result of bad actors consciously engaging in self-interested behavior at the expense of doing what is right. However, Messick and Bazerman (1996) argue against the perspective that executive ethics is primarily based on explicit tradeoffs between moral standards and profit. That is, ethical decision-making is not necessarily a rational, linear thought process as it is described in Rest's (1986) or Kohlberg's (1973) models. Rather, they contend that efforts to improve ethical decision-making are better aimed at understanding our psychological tendencies and, as Tenbrunsel & Smith-Crowe (2008) claim, the research examining the roles played by emotions, the subconscious, and intuition in our decisions highlights the incompleteness of rationalist

models. Furthermore, Moore, Tanlu, and Bazerman (2010) state that “if self-interest were computed rationally as an expected value and it then drove motivated reasoning, eliminating bias would be as simple as increasing the criminal penalties for fraud” (p. 46). In contrast to the traditional frameworks of ethics, Chugh, Bazerman, and Banaji (2005) proposed the concept of bounded ethicality.

Bounded ethicality refers to “systematic and predictable psychological processes” which allow one to engage in unethical behavior that is inconsistent with his or her moral standards (Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman 2010, p. 7). These processes include systemic errors, specifically, self-serving biases and heuristics, which inhibit one’s ability to make an ethical decision (Chugh et al. 2005). Implicit forms of prejudice, in-group favoritism, and a tendency to overclaim credit are all specific examples of biases that researchers in behavioral ethics have used to illustrate the role of bounded ethicality in decision-making (Banaji, Bazerman, & Chugh, 2003; Bazerman, 2011). As these psychological tendencies operate at a subconscious level (Gino, Moore, & Bazerman, 2011), the most insidious aspect of bounded ethicality is that it allows the person to behave unethically without his or her awareness of doing so. This is accomplished through the mechanism of ethical fading wherein one’s psychological constraints fade any moral considerations from the decision-making process (Tenbrunsel & Messick, 2004). Bounded ethicality and ethical fading may offer a considerable degree of explanatory power with respect to decision-making in a fraud context. However, theoretical models are typically scarce in relatively new fields such as behavioral ethics (Tenbrunsel & Smith-Crowe, 2008).

Research in psychology suggests that people, in general, value ethical behavior (Gino et al, 2011). As such, individuals are compelled to view and present themselves as moral and honest (Messick & Bazerman, 1996; Tenbrunsel, 1998) because of both the rewards to the self (i.e., maintains psychological well-being and a sense of self-worth) and the benefits derived from having a reputation of high moral character (Baston, Kobrynowicz, Dinnerstein, & Wilson, 1997). Most people, however, believe themselves to be more ethical than their peers (Tenbrunsel, 1998), overestimate the degree to which they will engage in behaviors that are socially acceptable in the future (Epley & Dunning, 2000), and perceive their own questionable actions as less objectionable than others performing similar actions (Valdesolo & DeSteno, 2007). Furthermore, research indicates that individuals have a propensity to exhibit “moral hypocrisy” wherein they present themselves as ethical, even while acting in a manner that conflicts with their views of morality (Baston, et al., 1997). Thus, an interesting question exists regarding how people are able to engage in behavior they would otherwise find unacceptable, or even reprehensible, while maintaining the belief that they are moral and honest. An understanding of two concepts from behavioral ethics and psychology, bounded ethicality and ethical fading, is an important step in addressing this question. However, in order to have a more fundamental understanding of these concepts, the “want” versus “should-self” distinction should first be examined.

#### “Want-self” versus “Should-self” Distinction

Bazerman, Tenbrunsel, and Wade-Benzoni (1998) proposed the “want-self” versus “should-self” distinction as a framework for understanding intrapersonal conflict (Tenbrunsel et

al., 2010). The “should-self” is characterized as rational, thoughtful, and “cool-headed,” and is believed to embody our ethical intentions and beliefs that we should act in accordance with our moral principles (Tenbrunsel et al., 2010). Conversely, the emotional, impulsive, and “hot headed” “want-self” is conceived as an expression of one’s self-interested desires and needs (Tenbrunsel et al., 2010). There exists a temporal element in the conflict between the “want-selves” and “should-selves” in that the “self” which dominates a person’s thoughts varies as that individual proceeds through the stages of predicting his or her behavior (the prediction phase), engaging in a behavior (the action phase), and then recollecting on the behavior performed (the recollection phase) (Bazerman & Tenbrunsel, 2011). The “want-self” versus “should-self” distinction is represented in *Figure 1*.

### The Prediction Phase

When an individual is making predictions about his or her future behavior, the “should-self” is believed to be in control (Tenbrunsel et al., 2010). The abstract nature of anticipating how one will behave in a particular scenario allows the individual to rationally and deliberately evaluate alternative actions and choose the behavior that is most consistent with his or her general attitude and moral principles. Essentially, during the prediction phase, people recognize how they *should* act (i.e., according to their respective moral principles) and believe that they will behave ethically if found in a situation similar to a particular hypothetical scenario (Bazerman & Tenbrunsel, 2011). Research, however, has demonstrated that individuals are prone to commit forecast errors when predicting behavior (Bazerman & Tenbrunsel, 2011; Diekmann, Tenbrunsel, & Galinsky, 2003).

When making predictions, there are several factors, which limit a person's ability to predict accurately his or her ethical behavior in a particular situation. One such factor is that individuals often fail to consider what their motivations will be during the action phase and, as a result, will commit attribution errors in their predictions (Diekmann et al., 2003). That is, people believe that their general dispositions will dictate future behavior while failing to consider the situational influences that may actually motivate their behavior. Trope and Liberman (2003) illustrate the attribution bias that may be exhibited when predicting one's behavior by utilizing an example where an individual decides whether to donate blood. When a person is asked to donate blood at a future date, that individual's general attitude, or disposition, towards giving blood will be the dominant influence on his or her decision to volunteer. However, when the day arrives for that person to make the donation, situation-specific factors such as the location and time of the collection are more likely to influence his or her behavior. Another factor which leads to forecast errors, as discussed by Newby-Clark, Ross, Buehler, Koehler, and Griffin (2000), is that an individual's predictions of his or her behavior are more of a reflection of that person's hopes and desires rather than a realistic understanding of the self. Furthermore, Epley and Dunning (2000) argue that one's predictions about ethical behavior tend to be overly optimistic and motivated by self-aggrandizement. Finally, predicting how one will behave in a given scenario takes place in a relatively "consequence-free" environment wherein the individual does not incur any real costs (i.e., social repercussions) from the choices he or she makes (Bazerman & Tenbrunsel, 2011). These factors help explain why there is a disparity between one's predictions of ethical behavior and his or her actual behavior in the action phase.

### The Action Phase

When the time comes for the individual to make a decision, one's rational "should-self" yields to his or her impulsive, emotional "want-self" (Tenbrunsel et al., 2010). At this stage, the individual is no longer afforded the opportunity to think abstractly or in general terms as he or she is confronted with the concrete realities of the situation. The contextual factors, or pressures, of the situation are interpreted through "systematic and predictable psychological processes" (Tenbrunsel et al., 2010) which "fade" consideration of the ethical implications resulting from one's decision or behavior (Tenbrunsel & Messick, 2004). As such, the person's thoughts regarding what he or she *wants* to do replace those of how one *should* act (Bazerman & Tenbrunsel, 2011), essentially giving that individual a "psychological license" to behave in a self-interested manner. Thus, one's probability of engaging in an unethical behavior increases when the "want-self" is given free reign. Bounded ethicality and ethical fading, as discussed later in this section, may help explain why the "want-self" yields to "should-self" during the action phase.

### The Recollection Phase

As the person moves beyond the action phase, the pressures present at the time of the behavior have diminished and that individual may return to thinking in abstract and general terms. As such, the "should-self" reasserts control when one is reflecting upon his or her behavior during the recollection phase (Bazerman & Tenbrunsel, 2011). During this phase, or at least once the person is past the action phase, an unethical behavior may become the new standard if it represents just a slight deviation from one's typical, perhaps moral, behavior. This



is because the difference between the unethical behavior and one's normal behavior is unnoticeable (Tenbrunsel & Messick, 2004).<sup>1</sup> As such, the person may continue without any adjustment to his or her behavior. However, if confronted with the idea that one might have behaved unethically, cognitive dissonance may occur (Festinger, 1957; Festinger & Carlsmith, 1959) as there will be an inconsistency between the person's unethical behavior and his or her self-image as an ethical individual.

Cognitive dissonance may produce unpleasant feelings such as guilt (Bandura, 1991, 1999; Sykes & Matza, 1957) that in turn will motivate the individual to change either his or her behavior or attitude to reduce any negative affect (Bandura, 1991, 1999; Festinger, 1957; Sykes & Matza, 1957). As it is typically easier to change one's beliefs rather than actions that have already occurred (Festinger & Carlsmith, 1959), the individual is likely to utilize a particular rationalization, moral disengagement, or neutralization technique to make the unethical behavior acceptable in his or her mind.<sup>2</sup> For example, research by Shu, Gino, and Bazerman (2010) indicates that individuals working in an environment that is permissive towards cheating will minimize the degree to which they see cheating as a moral issue (e.g., adopt the attitude that everyone cheats). Essentially, this act of changing one's standards of ethical behavior allows the person to preserve his or her self-image as a moral person while behaving in ways that violate his or her personal code of ethics (Bazerman & Tenbrunsel, 2011).

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<sup>1</sup> In fact, a deviation between an unethical behavior and one's normal behavior may be so slight that the person does not feel motivated to reflect upon that particular unethical action.

<sup>2</sup> See Murphy & Dacin (2011) for a discussion regarding the various types of rationalization, moral disengagement, and neutralization techniques that are used to justify one's behavior, especially acts of fraud.

## Summary of “Want-self” versus “Should-self” Distinction

The “want-self” versus “should-self” framework offers an initial, temporal explanation as to how an individual may act in ways that violate his or her own moral code while preserving a self-image as an ethical person. In the action phase of this framework, it is posited that unethical behavior may occur when contextual stimuli, or pressures, interact with certain psychological processes to fade the consideration of ethical implications at the time of the decision (Tenbrunsel & Messick, 2004), thus allowing “want-self” to assume control (Tenbrunsel et al., 2010). A question remains, however, as to *how* this interaction leads to ethical fading. Research on bounded ethicality (Bazerman, 2011; Tenbrunsel et al., 2010) may provide a structure for addressing this question.

### Bounded Ethicality

Bounded ethicality is defined as the “systematic and predictable psychological processes that lead people to engage in ethically questionable behaviors that are inconsistent with their own preferred ethics” (Tenbrunsel et al., 2010, p. 7).<sup>3</sup> These psychological processes include inherent biases and heuristics, which inhibit one’s ability to make an ethical decision (Chugh et al., 2005). Implicit forms of prejudice, in-group favoritism, and a tendency to overclaim credit are all specific examples of biases that researchers in behavioral ethics have used to illustrate the role of

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<sup>3</sup> Bounded ethicality is derived from Simon’s (1983) concept of bounded rationality, which states that human rationality is constrained and thus limited, by both contextual features and the individual’s computational abilities. Chugh, Bazerman, and Banaji (2005) applied Simon’s (1983) concept of boundedness, which was extended by Thaler (1996), to ethical decision making.

bounded ethicality in decision-making (Banaji et al., 2003; Bazerman, 2011). As these psychological processes operate at a subconscious level (Gino et al., 2011), the most insidious aspect of bounded ethicality is that it allows the person to behave unethically without his or her awareness of doing so. A theoretical model as to how bounded ethicality may influence ethical fading during the action phase is represented by *Figure 2*. What follows is an explanation of how bounded ethicality can lead to an unethical decision, as well as the critical role that ethical fading plays in this process.

#### Contextual Stimuli/Pressures

Kern and Chugh (2009) demonstrate that contextual factors such as time pressure, for example, can have an impact on one's ethical behavior. Additionally, studies involving the priming effect suggest that even unnoticed stimuli may significantly affect one's thoughts and actions (Kahneman, 2011). Despite the substantial influence that contextual stimuli may have on behavior, however, most individuals underestimate the degree to which these factors can influence their actions (Bazerman & Tenbrunsel, 2011). One explanation for this underestimation is that individuals, in general, view their respective moral identities as static and constantly active.

Wade-Benzoni, Li, Thompson, and Bazerman (2007) argue that although there are core traits of an individual that are static and thus generally unresponsive to changes, there are many other attributes which may become salient given the context of the situation or the individual's motivated state. Therefore, one's moral identity may be more of a "working self-concept" that is based on his or her social experiences rather than a static view of the self. In addition, Aquino,

Freeman, Reed II, Lim, and Felps (2009) argue that environmental factors can effectively “neutralize” one’s moral identity. For example, Murphy and Dacin (2011) point to a company that condones unethical behavior as one such factor that can overwhelm an individual’s predisposition not to commit financial statement fraud. Combining these arguments suggests that an individual’s moral identity is neither static nor always active, and that contextual factors may have a significant influence on such an identity. By translating these concepts into the terminology of bounded ethicality, I argue that semi-static environmental factors such as one’s corporate culture interact with other situational or task-specific factors to provoke certain biases and heuristics. In turn, the elicitation of these biases and heuristics results in the individual evaluating and interpreting the contextual stimuli not through a rigid moral lens, but in a manner free of moral considerations and influenced by the specific details of that context. What follows are explanations as to how particular biases and heuristics can lead to unethical behavior under two distinct systems of decision-making (*see Figure 2*).

### Unethical Behavior under System 1 Thinking

Kahneman (2011) describes decision-making as having two distinct modes of cognitive processing, labeled System 1 and System 2 thinking. The primary function of System 1 is to construct links among ideas of contexts, events, actions, and consequences that frequently coincide. These associations create a working model that facilitates one’s understanding of his or her environment, establishes a narrative for the events of that individual’s life, and develops expectations for the future. Kahneman (2011) characterizes System 1 thinking as automatic, intuitive, impulsive, effortless, and emotional. That is, System 1 evaluates contextual stimuli

“automatically and quickly, with little or no effort and no sense of voluntary control” (Kahneman, 2011, p. 20). In contrast, System 2 is deliberative, capable of reasoning, and associated with self-control. The primary function of System 2 thinking is to monitor the continuous intuitions, intentions, impressions, and feelings intuited by System 1. Essentially, one’s intuitions regarding a particular scenario are a product of the primitive evaluations carried out by System 1. However, these intuitions are subject to the systematic errors, or cognitive biases and heuristics, that are embedded within System 1 and activated under specified conditions (Kahneman, 2011).

### Biases and Heuristics

Caruso, Epley, and Bazerman (2006) argue that an individual’s perspective must necessarily affect his or her interpretation of environmental stimuli since the world can only be experienced through one’s own senses. As such, research indicates that an individual is often not able to interpret information in an unbiased way, even when it is so desired (Babcock & Loewenstein, 1997; Diekmann, Samuels, Ross, & Bazerman, 1997). This interpretation, and the subsequent weighting, of environmental stimuli are especially subject to biases related to egocentrism.

Egocentric biases are intended to maintain a person’s sense of self-worth such as the need to see him or herself as moral, competent, and deserving (Chugh et al., 2005). In a dilemma where a person’s self-worth is threatened, an individual is more motivated to avoid negative perceptions of the self (e.g. “I am not competent”) rather than pursue positive ones (e.g., “I am moral”) (Kahneman, 2011). As such, the need to maintain one’s self-worth can often lead to a

skewed interpretation of stimuli that favors the individual's preference for a particular outcome (Messick & Sentis, 1983) or results in the perception that the most beneficial outcome to him or her is the most "fair," or both (Tenbrunsel & Smith-Crowe, 2008). As discussed in Bazerman & Tenbrunsel (2011), an individual first determines his or her preference, based on self-interest, for a particular outcome and then legitimizes that preference by redefining the characteristics (i.e., the importance of those characteristics) which influence his or her perspective of fairness (Messick & Sentis, 1979; Messick & Sentis, 1983). This is consistent with Kunda's (1990) Theory of Motivated Reasoning, which posits that individuals can be unknowingly biased toward reaching a preferred outcome.

Since one automatically interprets information egocentrically (Epley & Caruso, 2004), that is, evaluates contextual stimuli on the basis of how those factors affect one's sense of self-worth, objective assessments of a situation may be challenging (Bazerman & Chugh, 2006). As discussed in Epley, Caruso, and Bazerman (2006), an individual will search for evidence that justifies his or her action which effectuates a preferred, self-interested outcome while evaluating more critically, or completely discounting, evidence that does not support the selection of that desired action (Dawson, Gilovich, & Regan, 2002; Ditto & Lopez, 1992; Ditto, Scepansky, Munro, Apanovitch, & Lockhart, 1998; Lord, Ross, & Lepper, 1979). In addition, evidence supporting the individual's desired action is often weighted more than that which does not (Babcock, Loewenstein, Issacharoff, & Camerer, 1995; Messick & Sentis, 1979). Furthermore, because these automatic and primitive evaluations happen so quickly and effortlessly, a person's perceptions may not feel biased or distorted in any way (Bazerman & Banaji, 2004).

## Affect-laden Intuition

Not only are contextual stimuli interpreted in a biased, egocentric manner, but they may also elicit an emotional reaction in a person (Slovic, 1999). If the stimuli produce negative affect, then the individual will be motivated to reduce those unpleasant feelings without engaging in more deliberative thinking (Kahneman, 2011). As such, visceral responses tend to dominate at the time a decision is made (Loewenstein, 1996). In addition to the incentive to swiftly resolve any negative affect, Murphy and Dacin (2011) argue that the individual may rely on his or her “affect-laden moral intuition” (i.e., a “gut feeling”) to determine whether a potentially unethical action to address a particular situation is acceptable. However, whereas Murphy and Dacin (2011) postulate that one will utilize affect-laden intuition to guide behavior once he or she is aware the potential act in question is fraudulent, I contend it is affect-laden intuition which may prevent one from recognizing the potential act of fraud as unethical.

Haidt (2011) asserts that moral judgment is often rendered by quick intuition. This may be due to the “affect heuristic,” which refers to how one’s intuitions, formed by the automatic and rapid emotions that precede cognition, are used as a basis to guide the person’s decisions and subsequent behaviors (Bazerman & Chugh, 2006; Finucane, Alkhami, Slovic, & Johnson, 2000). Kahneman (2011) contends that the affect heuristic is an instance of substitution. That is, System 1 answers a more difficult question (e.g., does this particular decision have ethical implications?) by automatically substituting and answering an easier one (e.g., how do I *feel* about this decision as opposed to its alternatives?). Thus, how the person feels with respect to each alternative decision will determine whether he or she engages in ethical fading and, as a result, unethical behavior.

## Ethical Fading and Unethical Behavior

Kahneman (2011) states that individuals are overconfident in (i.e., biased towards) their intuitions derived from automatic cognitive processes such as the affect heuristic. A person's behavior, therefore, is not necessarily the result of a conscious, reasoned decision to forsake his or her ethics in order to satisfy some other desire. Rather, one's behavior in an ethical dilemma is more "emotion driven" that is subject to the biased and automatic cognitive processes of System 1 thinking. Accordingly, if a potential unethical act may relieve any negative affect experienced in a particular dilemma, then the individual's affect-laden intuition is likely to suggest that such an act is "good" or, at least, appropriate, in that it is the most emotionally appealing. This desire to assuage visceral impulses can lead to ethical fading wherein the "moral colors of an ethical decision fade into bleached hues that are void of moral implications" (Tenbrunsel & Messick, 2004, p. 224), thus increasing the probability that one engages in unethical behavior without that individual's awareness that he or she is doing so. An application of bounded ethicality and ethical fading to a dilemma involving a manager failing to meet analysts' expectations can help synthesize these concepts and illustrate their role in influencing unethical behavior under System 1 thinking. Before applying these concepts, however, a brief discussion is necessary to differentiate ethical fading from other similar terms.

In the ethics literature, ethical fading has yet to be clearly distinguished from other related concepts such as ethical sensitivity, moral disengagement, neutralization, and rationalization. Hunt and Vitell (1992) characterize ethical sensitivity as an individual trait that



enables one to recognize a situation as having ethical implications.<sup>4</sup> As such, ethical sensitivity may be related to ethical fading in that one who is more aware of the moral implications of situation may be less inclined to fade ethically.

With respect to moral disengagement, Moore, Detert, Treviño, Baker, and Mayer (2012) argue that Bandura (2002) views this concept as a personal characteristic wherein the propensity to employ mechanisms of disengagement varies across people. Murphy and Dacin (2011) view neutralization and rationalization as different terms that describe the same construct as moral disengagement. That is, a mechanism which allows one to change his or her perception of either a situation or action, or both, in order to justify any potential or past behavior. One may infer from this conceptualization that utilizing one's ability to disengage (or neutralize or rationalize) is a conscious strategy employed by the decision maker. Ethical fading, in contrast, is the result of a subconscious processes. Thus, there is not a "conscious" decision to fade the implications from one's decision.

Whether moral disengagement is an antecedent to (e.g., Detert, Treviño, & Sweitzer, 2008), or is a consequence of (e.g., Shu, Gino, & Bazerman, 2011), unethical behavior is still an empirical question. Haidt (2001), however, contends that emotional reactions drive one's judgments and only afterwards does the person engage in reasoning that is more deliberate to justify his or her reactions. As such, if moral disengagement is a consequence, then ethical fading may explain the process that leads to an unethical act while disengagement describes how the individual "copes" with that behavior. Conversely, if it is an antecedent, then ethical fading may perhaps be a competing explanation for unethical behavior.

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<sup>4</sup> The term "moral awareness" is one that is used synonymously with ethical sensitivity.

### Example of Unethical Behavior under System 1 Thinking.

Bazerman and Tenbrunsel (2011) state that executives often depend on System 1 thinking given both the demands of their position and the hectic atmosphere in which they operate.

Murphy and Dacin (2011) discuss how one such demand, the importance placed on management to meet analysts' forecasts, can motivate an individual to act unintentionally in an unethical manner in order to achieve a particular goal. The effects of bounded ethicality and ethical fading under System 1 thinking can explain why some managers may unwittingly engage in unscrupulous behavior, that is, financial statement fraud, to meet these analysts' expectations.

Xu, Taylor, and Dugan's (2007) review of the real earnings management literature suggests that managers "take advantage of the accounting discretion in GAAP to manipulate accruals through accounting choices and estimates" (p. 195). Furthermore, Burgstahler and Eames (2006) provide evidence that managers avoid issuing earnings statements that are below analysts' expectations. This is accomplished by both upwardly managing reported earnings and downwardly managing the expectations of analysts. Thus, as argued by Murphy and Dacin (2011), management appears preoccupied with meeting analysts' estimates and will take advantage of nebulous accounting standards (i.e., manage earnings) in order to reach these goals. However, as the line between "clever earnings management" and outright fraud is sometimes indistinct, a manager can be too aggressive in meeting these targets and commit financial statement fraud without the awareness that he or she is acting unethically. In terms of bounded ethicality, this is likely due to a semi-static environmental factor (i.e., the pressure to meet analysts' expectations) provoking particular biases and heuristics which, in turn, fade any consideration of the ethical implications in one's decision.

As previously discussed, egocentric biases, such as one's need to see himself or herself as moral, competent, and deserving, function to maintain an individual's sense of self-worth (Chugh et al., 2005). These biases can be exaggerated under conditions of uncertainty (Bazerman & Tenbrunsel, 2011), which the interpretation of accounting standards can sometimes produce. As such, one's sense of both competency and deservingness as an executive may feel threatened if his or her company is unlikely to meet analysts' expectations. However, if the CEO is able to push beyond the acceptable boundaries of GAAP and achieve these targets, that manager is likely to prefer such an option because of the desire to uphold his or her sense of self-worth. Consequently, the manager will subconsciously search and place more emphasis on the evidence which supports the option to violate GAAP while evaluating more critically, or completely discounting, the evidence which does not support that option. The pressure to achieve analysts' targets may not only result in the individual interpreting the contextual stimuli in a biased, egocentric manner which favors the decision to push beyond the boundaries of GAAP, but it can also encourage risk-seeking behavior.

Prospect Theory (Kahneman & Tversky, 1979; 1984) maintains that outcomes that exceed a reference point are considered psychological gains and those below are losses. Correspondingly, analysts' estimates serve as a natural reference point (i.e., the status quo) for the management of public corporations (Murphy & Dacin, 2011). As such, the chance of not meeting forecasts, along with the forfeiture of benefits (e.g., stock options) that are normally associated with reaching such goals, is going to register as a psychological loss for a CEO. Prospect Theory (Kahneman & Tversky, 1979; 1984) further posits that people respond to relative, rather than absolute, changes in wealth and that individuals are loss averse (i.e., losses

loom larger than gains). Kahneman (2011) claims that loss aversion is embedded within System 1 thinking and encourages risk seeking when an individual is faced with two “bad” options (Kahneman & Tversky, 1984). That is, when given the option between a guaranteed loss of status and income (staying with the boundaries of GAAP and not meeting analysts’ estimates) and a riskier option (violating GAAP to meet earnings forecasts), an individual will choose the latter (Moore et al., 2006; Schweitzer, Ordóñez, & Douma, 2004). Finally, in addition to inducing risk-seeking behavior, experiencing a loss by not meeting analysts’ targets may also evoke strong, negative emotions (Kahneman, 2011).

Extending Kahneman’s (2001) thinking to a managerial setting I would expect that, along with the unpleasant emotion prompted by a potential loss, the threat to a manager’s sense of self-worth will elicit negative affect. That is, not achieving the critical goal of meeting forecasts suggests to the manager that he or she is not suited for an executive position. This creates an uncomfortable conflict within the individual (i.e., cognitive dissonance) since the person has the psychological need to see him or herself as competent, “good” at that particular job, intelligent, and so forth. Additionally, the manager may deem the situation of not meeting analysts’ targets as “unfair” since he or she deserves the benefits (e.g., stock options) that are associated with reaching such goals, especially given the amount of work that an executive position requires. The manager will be motivated to reduce the negative feelings created from both the sense of loss and the attacks on his or her ego and will, as a result, rely on an affect-laden moral intuition to determine whether violating GAAP is acceptable.

The manager is likely to depend on an affect heuristic where the negative emotions produced by not meeting analysts’ forecasts serve as the basis to guide his or her decision. Thus,

the executive automatically substitutes a difficult question (what is the ethical or proper action?) with an easier one (how does choosing this particular option make me feel?). At this point, ethical fading has transpired and the manager's affect-laden intuition suggests that contravening GAAP, in which the evidence supporting this option has been skewed in its favor, is appropriate as it will relieve the negative emotions experienced in this scenario. However, if the manager has ambiguous or conflicting intuitions about this decision, then he or she may utilize a more deliberate reasoning approach (Murphy & Dacin, 2011) that is consistent with System 2 thinking.

#### Unethical Behavior under System 2 Thinking.

Kahneman (2011) states that System 2, as opposed to the impulsive and intuitive nature of System 1, is cautious, deliberative, capable of reasoning, and associated with self-control. One of the main tasks of System 2 thinking is to monitor the continuous intuitions, intentions, impressions, and feelings suggested by System 1. Additionally, System 2 has the ability to exert control in difficult situations (i.e., instances of cognitive strain), such as when one's intuitions are unclear or conflicting, and expend the additional energy required for logical analysis, expression of judgments, and making choices. System 2 is thus considered the final authority in decision-making as it is able to resist the suggestions of System 1. Although one is more likely to behave ethically if he or she is able to utilize System 2 (Bazerman & Tenbrunsel, 2011), this mode of thought shouldn't be considered a perfect model of rationality (Kahneman, 2011) given both its operational limitations that are a result of the structuration between the two systems to divide cognitive labor and its dependence on biased knowledge used to frame the situation.

Typically, System 2 operates without putting forth much effort and passively accepts the suggestions of System 1 with little or no modification (Kahneman, 2011). The division of labor between Systems 1 and 2 is structured for the sake of optimizing cognitive performance while minimizing effort (Kahneman, 2011). Addressing the ethical implications of a dilemma requires the deliberate reasoning of System 2, however, but its indolence for the sake of cognitive efficiency prevents such analyses. Kahneman (2011) also states that questioning one's intuitions is uncomfortable, which helps reinforce the inertness of System 2. Yet, despite its general "laziness," System 2 will put forth effort when prompted to do so by System 1 (Kahneman, 2011).

Traditional models of ethical decision-making such as Rest's (1986) assert that moral reasoning precedes moral judgment (Bazerman & Tenbrunsel, 2011). Conversely, Haidt (2001) argues that it is emotional reactions that drive one's judgments and only afterwards does the person engage in more deliberate reasoning to justify his or her reactions (Bazerman & Tenbrunsel, 2011). Thus, rationalizing the emotions generated in System 1 is a characteristic of System 2, making it more of an "apologist" for the affect-laden intuitions of System 1 rather than a critic of them (Kahneman, 2011). Accordingly, if one's affect-laden intuition is unambiguously leading that person towards an unethical decision, then System 2 is not likely to engage and will passively endorse the option. However, if the individual's intuition is unclear or conflicting, then he or she is inclined to utilize the reasoning capabilities of System 2. A problem exists, though, in that System 2 depends on System 1's egocentric interpretation of the contextual stimuli to conduct its analyses.

As discussed earlier, under System 1 thinking, an individual will search for evidence that justifies pursuing a preferred outcome while assessing more critically, or completely discounting, evidence that does not support the selection of that desired action (Epley, Caruso, & Bazerman, 2006). In addition, evidence supporting the individual's preferred option is often given more weight than that which does not (Babcock, Loewenstein, Issacharoff, & Camerer, 1995; Messick & Sentis, 1979). Since these automatic and crude evaluations happen so quickly and effortlessly, a person's perceptions may not feel biased or distorted in any way (Bazerman & Banaji, 2004). The end result is that one subconsciously excludes relevant and important information while including and overweighting that which is irrelevant or simply not as important, (referred to as "bounded awareness"), thus distorting the type of decision the person thinks he or she is making (Bazerman & Tenbrunsel, 2011). Consequently, System 2's reliance on biased information may allow the individual to frame his or her decision as an "economic" or "legal" dilemma rather than one that has ethical implications.

#### Reasoning Utilizing a Non-ethical Decision Frame

Neale, Huber, and Northcraft (1987) argue that both task-responsive and contextual stimuli can frame a person's decision in systematic and predictable ways. As such, various "mixtures" of contextual, situational, and task-specific factors may result in different decision frames that, in turn, bring about different responses. Pillutla and Chen (1999) demonstrated the framing of a social dilemma influences ones' tendency to cooperate in that situation. In their study, individuals were less cooperative when presented with a dilemma framed in economic rather than one framed in non-economic terms, despite both dilemmas having the same payoffs

(Tenbrunsel & Messick, 1999). In addition, problems interpreted as threats or crises may elicit different responses than those interpreted as opportunities (Tenbrunsel & Northcraft, 2008). Both the argument posited by Neale et al. (1987) and the research by Pillutla and Chen (1999) seem to be consistent with the logic of appropriateness framework.

The logic of appropriateness framework states that a person first identifies what type of decision he or she perceives to be making and that judgment will in turn determine behaviors, norms, and expectations (Messick, 1999; Tenbrunsel & Smith-Crowe, 2008). A personal anecdote from Messick (1999, p. 11-12) helps elucidate the logic of appropriateness framework:

“In the mid-1970s my family and I lived in Bergen, Norway. During the Easter school break, we joined most Norwegians in going to the mountains for cross-country skiing. We stayed in a communal cabin in the mountains in western Norway with six other families. Each family had its own bedrooms, but we shared the kitchen facilities and dining area. The atmosphere was friendly and cooperative.

A couple of days before the end of our stay, an announcement was made that there would be a ping-pong tournament for the residents of the cabin. It would be a single elimination tournament, handicapped so that children under 14 got a 10-point bonus when playing against an adult, and women got a 10-point bonus when playing against an adult man. A schedule was presented so that every person knew whom they were to play, winners knew whom they were to play when they won, and so on.

At the end of the first day of play, I discovered that I was in the final match to be played the following morning. I was to play a 14 year-old girl. I also discovered that all of the other adults had lost to children early in the tournament. I was the only one who had moved forward. I realized then, of course, that this tournament was designed and intended to have a child as the winner. All of the adults (save me) understood this. I had a different understanding. My incorrect understanding was comprehensive. It not only influenced how I played (to win) but also my expectations of how others would play (to win), my perception of the rules and norms (everyone will try hard), and my interpretation of outcomes (losers of matches were not good enough players to overcome the handicap), along with the attributions these interpretations supported.



The new interpretation led not only to a different prescription for choice (lose if you are an adult, especially if you are a man), but also to new expectations about how others would act (adults will lose), what the rules and norms were (kids should win, but should not be told that they are being allowed to win), and how I interpreted the play of the others, especially the men in the cabin (there is nothing to be learned about skill level from the matches). The skill attributions I had made from the other vantage point were almost surely incorrect.”

In applying the logic of appropriateness framework to ethical decision-making, one may infer that the type of decision frame an individual adopts will determine whether he or she recognizes the situation as having ethical implications (Tenbrunsel & Smith-Crowe, 2008). That is, people who view a particular situation as an ethical dilemma (an ethical frame) are morally aware and as a result will frame the decision as one that has ethical implications. However, those who do not see the situation as an ethical dilemma (e.g., an economic or legal frame) are not morally aware and will thus not frame the decision as having ethical consequences. Research by Tenbrunsel and Messick (1999) demonstrates how interpretations of contextual factors, in the form of adopting either an ethical or non-ethical decision frame, may influence one’s behavior.

Tenbrunsel and Messick (1999) investigated how sanctioning systems affect cooperative behavior in dilemma situations. In two of the three experiments, participants were asked to assume the role of a manufacturer in a toxic-gas emitting industry and make a decision to adhere to (cooperate), or defect from, an agreement which would voluntarily reduce their company’s emissions. The results show that participants were more likely to adopt a non-ethical decision frame (i.e., an economic frame) in the presence of a sanctioning system, which was designed to deter defection from the agreement, than those participants not operating under such a system. Furthermore, the participants under a weak sanctioning system were more likely to defect than those under a stronger system or those who faced no sanctions at all. Thus, a participant’s

decision to defect or cooperate depended on both how the participants framed the decision (ethical vs. economic) and the strength of the sanctioning system. Tenbrunsel and Messick (1999) proposed a two-stage, “signal processing” model to help explain their results (Tenbrunsel & Smith-Crowe, 2008).

According to Tenbrunsel & Messick’s (1999) signal processing model, an environmental factor such as the presence of a sanctioning system has both signaling and processing effects. That is, the sanctioning system signals to the individual the type of decision he or she is to make. Based on that signal, an individual adopts a particular decision frame that influences “the unique processing that occurs within that frame” (Tenbrunsel & Smith-Crowe, 2008, p. 564). Applying this model to explain Tenbrunsel and Messick’s (1999) results, the presence of a sanctioning system signaled to the participant that he or she was making a business decision whereupon a cost-benefit process was to be utilized. Participants under the strong sanctioning system calculated the potential costs of defection as too high and were thus more likely to cooperate than those individuals in the weak sanctions manipulation who estimated that the benefits of defection outweighed the costs. Conversely, as social dilemmas typically give rise to both economic and ethical considerations (Tenbrunsel & Messick, 1999), the participants not operating under a system of sanctions were able to focus more on the ethical implications of defecting or cooperating since their attention was not specifically cued to the economic consequences of their actions.<sup>5</sup> As such, these participants were more likely to adopt an ethical frame and thus process

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<sup>5</sup> With respect to the non-ethical decision frame, an argument can be made that considerations regarding the ethical implications of alternative decision are not completely absent from an individual’s decision-making process.

their decision utilizing a “cooperative” heuristic (Tenbrunsel & Messick, 1999). Essentially, one may infer that the adoption of an ethical decision frame encourages one to consider the ethical implications of alternative decisions whereas the utilization of a non-ethical frame may lead to a fading of those considerations.

### The Role of Self-Deception and Ethical Fading

Although one’s affect-laden moral intuition may be ambiguous as to whether a potential unethical act is acceptable, the motivation to reduce any negative affronts to the individual’s self-worth will remain. As such, the person may resort to self-deception. Tenbrunsel and Messick (2004) propose that self-deception is a key element, which explains the relationship between environmental cues and how one construes a particular situation. They argue, simply, that contextual stimuli may activate a self-deception mechanism that, in turn, influences the type of decision frame one adopts. With respect to egocentric biases, if they are provoked, that is, if the individual’s sense of self-worth is under attack, then he or she may resort to self-deception in order to maintain a particular self-image (Tenbrunsel, 2005). As the level of self-deception required by the individual increases the likelihood that the person will adopt an ethical decision frame decreases, thus lessening the saliency of the situation’s moral dimensions (Tenbrunsel & Messick, 2004). Ethical fading occurs since an ethical frame is not adopted, thus increasing the probability that one engages in unethical behavior without that individual’s awareness that he or

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Instead, they may simply be “out of focus” because the individual is primarily focused on the self (Bazerman & Chugh, 2004).

she is doing so. Returning to the dilemma of a manager not meeting analysts' forecasts can help illustrate the effects of decision framing on ethical fading.

#### Example of Unethical Behavior under System 2 Thinking

If a manager is not expected to meet analysts' forecasts, then that person will be motivated to reduce the negative feelings created from both the sense of loss and the damage to his or her ego. As a result, the manager may rely on an affect-laden moral intuition to determine whether pushing the limits of GAAP is acceptable. However, if the manager's intuitions are ambiguous about this decision (i.e., suggesting that a particular action may in fact violate GAAP), then he or she will utilize the reasoning ability of System 2 when prompted to do so by System 1.

The reasoning ability of System 2 may be limited by its reliance on System 1's biased processing of contextual stimuli. As previously mentioned, System 1 excludes relevant and important information while including and overweighting that which is irrelevant or simply not as important, thus distorting the type of decision the person thinks he or she is making (Bazerman & Tenbrunsel, 2011). As such, a manager failing to meet analysts' expectations results in that person focusing on the attack to his or her self-worth while ignoring other, relevant information which does not influence one's self-perception. The distress experienced from this situation motivates the individual to self-deceive in order to maintain his or her self-image as competent and deserving. Although the person's affect-laden intuition may initially suggest that pushing beyond the boundaries of GAAP is wrong, self-deception (i.e., assuring oneself that he or she is competent and deserving) allows the individual to frame the decision as an opportunity

to correct for the “unfairness” of the situation.” Thus, ethical fading is likely to occur as the individual adopts a non-ethical decision frame.

### Implications for Accounting Research

TUAB has the potential to predict and/or explain unethical behavior across the different functional areas of accounting research. With respect to Financial Accounting research, TUAB may explain how disclosures and ambiguity in the reporting standards may actually promote unethical acts. For example, corporations are required to disclose the processes that underlie their Level 3 fair value estimates (Financial Accounting Standards Board, 2011). Christiansen, Glover and Wood (2013) argue that even though these estimates possess a significant degree of uncertainty, auditors are dependent on management’s judgment due to the “unobservable” nature of the assumptions and inputs that are a part of the valuation process. Research, however, has shown that disclosure can actually exacerbate bias and can thus have a perverse influence on behavior (Cain, Loewenstein, & Moore, 2005). As such, disclosure may give a manager the psychological license to manipulate the inputs of fair value estimates in order to improve the appearance of his or her company’s financial statements.

The SEC has stated its desire for the adoption of a global set of accounting standards such as the International Financial Reporting Standards (IFRS) (SEC, 2010). Those who support this measure contend that adopting a single set of principles-based accounting standards will benefit the investor because of increased comparability and simplicity in the financial reports. However, due to the ambiguity inherent in principles-based standards, there are concerns regarding IFRS. Wade-Benzoni, Li, Thompson, and Bazerman (2007) argue that ambiguity in a

situation allows people to exaggerate their competence in a particular area. Thus, the move to principles-based guidelines, especially for revenue recognition, might be a catalyst for unethical behavior as managers will have leeway in interpreting those rules in a more self-serving manner than is possible under rule-based guidelines.

In regards to the AIS area, there is a stream of research that examines the ethicality of implementing various types of information systems (e.g., Sutton, Arnold, & Arnold, 1995, Dillard, Ruchala, & Yuthus, 2005). Dillard et al. (2005, p. 108), in particular, argue that enterprise resources planning systems (ERPs) are “the physical manifestation of instrumental rationality.” That is, ERPs promote a focus on the process for completing a task in the most effective and efficient way without any consideration of the ethical implications of engaging in that process. Considering the ubiquity of information systems across all sizes and types of organizations, whether these systems foster an environment of instrumental rationality is an important ethical question for which TUAB can be utilized.

Some academics argue that conflicts of interest are pervasive in auditing given the current structural characteristics of that profession (e.g., Bazerman, Morgan, & Loewenstein, 1997; Moore et al., 2006). Moore et al. (2006) contend that these characteristics (e.g., the client is who pays the auditor, auditors accepting positions from ex-clients, and so forth) both promote motivated reasoning and exacerbate self-serving biases in auditors whereupon they become more likely to acquiesce to their clients demands or perhaps even ignore any questionable behavior thereof. In his summary of the literature that examines conflicts of interest in auditing, Nelson (2005) concludes that the experimental research supports the notion that conflicts of interest do seem to affect decisions in audit settings. In particular, research has shown that social pressures

(e.g., Moore et al., 2010) and incentives (Hackenbrack & Nelson, 1996) can influence an auditor's decision with respect to reporting. Thus, in regards to the Auditing research area, TUAB can be used to explain how and why auditors sometimes negate their professional judgment and accede to their clients' demands.

There is considerable research in the Tax area that has examined factors related to behaviors such as tax compliance (e.g., Bobek & Hatfield, 2003; Bobek, Roberts, & Sweeney, 2007; Davis, Hecht, Perkins, 2003), tax avoidance (e.g., Dyreng, Hanlon, & Maydew, 2010) and tax fraud (e.g., Lennox, Lisowsky, & Pittman, 2013). TUAB may help explain how and why taxpayers, both at the individual and organizational level, are willing to engage in these behaviors or push the boundaries of tax law. Furthermore, research in the Tax area has investigated the ethical decision-making of tax practitioners (e.g., Burns & Kiecker, 1995). The willingness for some accountants to establish illegal and quasi-legal tax shelters on behalf of their clients, for example, can perhaps be explained by TUAB in addition to other "aggressive" tax-related behaviors.

With respect to the Management Accounting area, TUAB may help explain a range of deviant behaviors. In particular, TUAB can be applied to explain types of frauds, apart from financial statement fraud, such as the misappropriation of assets (e.g., Chen & Sandino, 2012), bribery (e.g., Christensen, 2015), and transfer price manipulation (e.g., Mehafdi, 2000). Furthermore, TUAB can be utilized to address ethical and quasi-ethical issues related to budgeting and performance measurement such as dishonesty in budget reporting (e.g., Church, Hannan, and Kuang, 2012), the creation of budgetary slack (e.g., Davis, DeZoort, & Kopp, 2006), biased performance evaluation (e.g., Bol & Smith, 2011), and performance measurement

manipulation (Demski, 1998). Finally, TUAB can be used to explore issues related to corporate social responsibility disclosure (e.g., Roberts, 1992). As previously mentioned, research suggests that disclosure can actually provoke bias which, in turn, can have a perverse influence on behavior (Cain et al., 2005). Thus, TUAB can explain how social responsibility disclosure may actually give managers the psychological license to engage in undesirable corporate actions such as the exploitation of third-world labor, for example.

Research is needed to assess TUAB's explanatory power regarding the behaviors of professional accountants and managers listed above. In particular, research should focus on both exploring the relationship between ethical fading and unethical behaviors and identifying the psychological operations (i.e., biases and emotions) that lead to ethical fading across various accounting contexts. It is reasonable to postulate that ethical fading can result from an array of biases and emotions that vary across situations due to factors that are specific to particular contexts. Finally, research should examine how individual characteristics (e.g., the dark triad) and organizational characteristics (e.g., corporate culture) affect the psychological processes as described in TUAB.

### Contributions

The primary contribution of this chapter is that it unifies disparate theories and ideas from psychology and behavioral ethics as a means of constructing a testable theory that includes the concepts of bounded ethicality and ethical fading. Bazerman and Tenbrunsel (2011) contend that traditional models of ethical decision-making such as Rest (1986) and Kohlberg (1973) are built on a faulty supposition that judgments are based on a rational, linear thought-process, thus



making those models incomplete. Specifically, these models assume that (1) awareness is necessary for the decision to have ethical implications, (2) reasoning will determine an individual's judgment (moral judgment), (3) and moral intention is necessary for one to understand his or her action (moral intention). Research from psychology and behavioral ethics, however, suggests that individuals often (1) lack moral awareness, (2) judge before utilizing moral reasoning, and (3) misjudge moral intention (Bazerman & Tenbrunsel, 2011).

Consequently, this research, which examines how emotions, the subconscious, and intuition affect decision-making, highlights the limitations of rationalist models (Tenbrunsel & Smith-Crowe, 2008). In regards to the accounting literature, Bazerman et al. (2006) are critical of researchers in this discipline, especially those who utilize the "tools of economics," for not being concerned with the distinction between an act of conscious corruption and an error resulting from unintentional bias.<sup>6</sup> Thus, this chapter contributes to the ethics and accounting literatures by introducing a testable model that differentiates between intentional and unintentional behavior by considering the systematic, psychological errors that constrain one's ability to make an ethical decision, as well as the contextual factors that exacerbate those errors.

This chapter also contributes to the academic literature by extending the work of Murphy and Dacin (2011). Murphy and Dacin (2011) developed a framework that identifies the psychological pathways an individual may follow when making the decision to engage in fraud. Within this framework, they acknowledge that contextual factors (i.e., obedience to authority,

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<sup>6</sup> For example, Bazerman et al. (2006) point to models of auditor independence (e.g., Antle, 1984; DeAngelo, 1981; Simunic, 1984) which assume that the auditor makes a deliberate, conscious decision to either conduct an unbiased audit or collude with the client's managers.

organizational culture, the pressure to meet analysts' forecasts) may drive an individual to commit unintentional fraud. As such, this chapter provides a more detailed understanding of this phenomenon by its incorporation of the bounded ethicality and ethical fading concepts.

TUAB also offers potential contributions to auditors, management, and regulators. An understanding of bounded ethicality and ethical fading may have potential implications for the auditing profession in that it can increase an auditor's sensitivity to both the contextual factors that can lead to unintentional financial statement manipulation and his or her own susceptibility to systematic errors when dealing with clients. Research indicates that auditors attach substantial weight to management's character and attitude when conducting fraud risk assessments (Heiman-Hoffman, Morgan, & Patton, 1996). As such, auditors will adjust their decisions based on their evaluations of management's integrity (Ayers & Kaplan 1998; Beaulieu 2001; Kizirian, Mayhew, & Sneathen, 2005; Shaub 1996). However, as discussed in Wilks and Zimbelman (2004), regulators and practitioners have expressed concern regarding the overreliance on management's attitude when an auditor's perception suggests a low risk of fraud. This is a valid concern given both auditors' historically low rates of fraud detection (Cullinan & Sutton, 2002) and their documented deficiencies in testing for such risk as reported by the PCAOB (Trompeter et al., 2013).<sup>7</sup> If most unethical behavior is unintentional (Bazerman & Tenbrunsel, 2011), and bounded ethicality and ethical fading thus play significant roles in most accounting fraud, then a manager's behavior may not indicate that he or she behaved unethically even if such an act was

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<sup>7</sup> Among its sample, the ACFE (2012) survey data reveals that accounting fraud was initially discovered by an external auditor review in only 5.7% of the cases. This percentage is relatively consistent with surveys conducted before the implementation of SOX (e.g., KPMG, 1998).

committed. A manager may believe that he or she utilized “clever earnings management” techniques rather than outright deceptive practices since the line between the two is not necessarily distinct. An understanding of bounded ethicality and ethical fading may improve an auditor’s sensitivity to the contextual features, which can compel a manager to unintentionally engage in unethical behavior. Additionally, an awareness of systematic psychological errors may heighten skepticism when an auditor’s perception of management’s integrity indicates a lower fraud risk. As such, knowledge of bounded ethicality and ethical fading may improve an auditor’s ability to detect fraud.

Moore, Tetlock, Tanlu, and Bazerman (2006) discuss that professionals are vulnerable to the same biases as laypersons or novices and are often unaware of how compromised they are in conflict of interest situations.<sup>8</sup> With respect to auditor independence, the external audit process inherently contains a conflict of interest since there is tension between pleasing a paying client and ensuring that client adheres to generally accepted accounting principles (Moore et al., 2006). As such, Bazerman, Moore, Tetlock, and Tanlu (2006) claim that the “clear findings of the psychological perspective on auditing is that a bias can exist in auditors without their being aware of it” (p. 45).<sup>9</sup> Thus, an understanding of bounded ethicality and ethical fading may also assist with auditors’ recognition of their psychological limitations when dealing with clients.

Bazerman and Tenbrunsel (2011) argue that the demands of an executive position may intensify the role of bounded ethicality in decision-making. As such, research on bounded

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<sup>8</sup> Moore et al. (2006) propose a “Theory of Moral Seduction” from which this hypothesis is derived.

<sup>9</sup> For example, the results of an experiment utilizing Big 4 auditors suggest that their judgments are biased by client preference (Moore, Tanlu, & Bazerman, 2010).

ethicality and ethical fading may also benefit management and the companies they represent. Tenbrunsel et al., (2010) state that most efforts to improve ethics within organizations have ignored the individual faced with the dilemma and have focused instead on formal systems such as training and developing a code of ethics. This current “fix-it” approach, they contend, ignores the psychological processes that may undermine organizational-level interventions. Thus, knowledge of bounded ethicality and ethical fading, and the contextual factors that influence these processes, may allow organizations to design superior fraud-deterrence mechanisms. Finally, understanding their own biases and heuristics may help CEOs and CFOs be more psychologically prepared when confronted with opportunities to engage in accounting fraud.

An understanding of bounded ethicality may assist legislators in designing laws that are more effective in influencing the ethicality of organizational actors. Bazerman and Banaji (2004) argue that the common assumption embedded in laws such as SOX is that unethical behavior is the result of a bad actor consciously sacrificing his or her ethics. A failure to understand the psychological constraints on ethical decision-making, as well as the subconscious nature in which these constraints operate, may limit the effectiveness of legislation aimed at influencing ethical behavior in organizations. Recognizing the distinction between conscious corruption and unconscious bias is imperative to the implementation of effective anti-fraud measures as both drivers of behavior respond to different incentives (Moore et al., 2006). In addition to recognizing this distinction, researchers have also proposed that the definition of fraud should be reconsidered.

Bazerman and Banaji (2004) state that the “pervasiveness of what is termed ‘unethical’ must be rethought, and as such the solutions to contemporary ethical scandals may need special

attention” (p. 111). Concomitantly, Bazerman et al. (2006) assert that accounting academics should recommend that the definition of fraud be broadened to include any deviations from accuracy, regardless of the intentionality or awareness of those deviations. Legally, fraud is distinguished from error in that fraud is defined as an intentional act (Bazerman et al., 2006). As such, successful prosecution of fraud typically requires demonstrating that the fraudster knew he or she was in fact misstating the financials in an attempt to deceive auditors, investors, or other parties. However, if bounded ethicality and ethical fading have considerable explanatory power with respect to fraudulent behavior, then it is reasonable to ask whether the definition of fraud is narrow, or even naïve. Expanding the legal definition to include unintentional acts would make executives more accountable for the harms their organizations create when fraud is committed.

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### **CHAPTER 3: UNINTENTIONAL FINANCIAL STATEMENT FRAUD IN AN ERA OF ESCALATING MANAGEMENT PAY: THE ROLE OF EGOCENTRISM, ENVY, AND ETHICAL FADING (STUDY 2)**

#### Introduction

Despite extensive legislative efforts designed to improve corporate ethics, such as the passage of the Sarbanes-Oxley Act of 2002 (SOX), incidents of accounting fraud have increased over the past decade (PricewaterhouseCoopers, 2011). One possible reason that explains SOX's inability to curtail fraud is the law's assumption that such behavior is intentional. Embedded in laws such as SOX is the common supposition that unethical behavior is the result of a conscious decision. However, Moore, Tanlu, and Bazerman (2011) argue that "if self-interest were computed rationally as an expected value and it then drove motivated reasoning, eliminating bias would be as simple as increasing the criminal penalties for fraud" (p. 46). In contrast to the traditional frameworks (e.g., Kohlberg, 1973; Rest, 1986) that view ethical decision-making as a rational, linear thought process, Chugh, Bazerman, and Banaji (2005) proposed the concept of bounded ethicality.

Bounded ethicality is defined as the "systematic and predictable psychological processes that lead people to engage in ethically questionable behaviors that are inconsistent with their own preferred ethics" (Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman 2010, p. 7). These processes include inherent biases and heuristics that inhibit one's ability to make an ethical decision (Chugh, Bazerman, & Banaji, 2005). Implicit forms of prejudice, in-group favoritism, and a tendency to overclaim credit are all specific examples of biases that researchers in behavioral ethics have used to illustrate the role of bounded ethicality in decision-making

(Banaji, Bazerman, & Chugh, 2003; Bazerman, 2011). As these psychological tendencies operate at a subconscious level (Gino, Moore, & Bazerman, 2011), the most insidious aspect of bounded ethicality is that it allows the person to behave unethically without his or her awareness of doing so. This is accomplished through the mechanism of ethical fading wherein one's psychological constraints fade any moral considerations from the decision-making process (Tenbrunsel & Messick, 2004).

Identifying and examining the psychological operations that lead to ethical fading, as well as the contextual factor that trigger those operations, can contribute towards implementing measures that are more effective at deterring and preventing accounting fraud. Research in behavioral ethics suggests that once such factor, pay inequality, can provoke psychological processes (i.e., biases and negative emotions) that, in turn, induce ethical fading and thus increase the likelihood of cheating behavior. In particular, Gino and Pierce (2009) argue that envy toward wealthy targets, whether individuals or organizations, influences the probability that a person will engage in unethical behavior to attain similar wealth and reduce inequality resulting from differences in wealth. The study's results imply that abundant wealth activates perceptions of unfairness in those individuals who operate in the wealthy environment. The distress created from those perceptions drive feelings of envy, which, in turn, induces unethical behavior. Gino and Pierce (2009) also believe that their results are generalizable to fraudulent behavior. Their theoretical argument, and its empirical support, can be explained by the concepts of bounded ethicality and ethical fading. Thus, as the average CEO pay continues to skyrocket, it follows that managers who earn less than their peers may be more likely to succumb to ethical fading and, as a result, commit fraud. The purpose of this chapter is to examine how a particular

contextual factor, inferior pay among managers, provokes egocentric perceptions of unfairness and envy to affect the likelihood of one engaging in ethical fading and fraudulent behavior.

The Theory of Unintended Amoral Behavior (Chapter 2, hereafter TUAB), which incorporates the concepts of bounded ethicality and ethical fading, is drawn from to predict that a manager who compares his or her pay to a higher-paid referent will perceive the disparity as more unfair than a manager who compares his or her earnings to a lower-paid referent. In addition, it is hypothesized that this perception will trigger a feeling of envy, which, in turn, increases the probability of ethical fading, and thus fraudulent behavior, in the manager who is paid less. A 1 x 2, between-participants design was used to test these predictions. The experiment required participants to sell assets of given values (ranging from excellent to poor) to a computerized buyer. One group (high-pay rate) earned more money on each successful transaction than the other (low-pay rate). Before each attempted sale, the participants had the opportunity to change the asset's value from what was initially provided. Intrinsically, there existed an incentive for the participant to misrepresent lower quality assets as higher in that selling assets disclosed as high quality could have resulted in larger payouts. The participants' egocentric perceptions of unfairness, episodic envy, ethical fading, and rate of misrepresentation were measured during this experiment.

The results indicate that one who is paid at a lower rate is more likely to view this disparity as unfair, which leads to a greater feeling of envy. Although envy had no significant direct effect on ethical fading in the primary analyses, a supplemental analysis revealed that a person's risk preference might moderate this relationship. The primary findings of this chapter, albeit somewhat mixed, suggests that individuals who experience a higher degree of ethical

fading are more likely to commit fraud, and that ethical fading, along with perceived unfairness, are significant psychological processes that explain how differences in pay may lead to fraud.

Overall, the main contributions of this chapter is that it both provides initial support of TUAB (Chapter 2) and identifies a key contextual factor, pay disparity, and its effect on the psychological processes that constrain one's ability to act ethically. In addition, it presents evidence that the decision to commit fraud is not necessarily a conscious trade-off between ethics and some other desired goal (e.g., profit). Furthermore, supplemental analysis suggests that future research on TUAB (Chapter 2) should consider how individual characteristics might influence the processes proposed in the model. This research also provides specific contributions to the auditing profession, organizations, and regulators.

With respect to the auditing profession, an understanding of how certain contextual factors and psychological processes interact to influence unethical behavior may result in improved fraud detection. In addition, given the subconscious nature of ethical fading, this research suggests that auditors reconsider the substantial weight they attach to management's character and attitude when conducting fraud risk assessments. In regards to organizations, knowledge of bounded ethicality may allow businesses to design superior fraud controls aimed at mitigating the contextual factors that influence ethical fading. Furthermore, understanding one's own biases and heuristics may help managers be more psychologically prepared when confronted with the decision to engage in accounting fraud. Finally, this chapter suggests to regulators that recognizing the difference between intentional corruption and unintentional bias, and the factors that drive such bias, is needed to establish more effective fraud deterrents.



The remainder of this chapter is organized as follows. Section 2 provides an overview of the TUAB (Chapter 2) and develops hypotheses from that theory. Section 3 explains the experimental method employed to test those hypotheses along with the manipulation and measurement of the variables. Section 4 analyzes the statistical results and Section 5 discusses the findings. Finally, Section 6 concludes the chapter and offers a discussion of its limitations.

### Theory and Hypothesis Development

Most individuals perceive themselves as more ethical than their peers (Tenbrunsel, 1998), overestimate the extent to which they will engage in behaviors that are socially acceptable in the future (Epley & Dunning, 2000), and view their own dubious actions as less objectionable than the comparable conduct of others (Valdesolo & DeSteno, 2007). Furthermore, research suggests that people often display “moral hypocrisy” wherein one presents him or herself as an ethical person while simultaneously behaving in a manner inconsistent with his or her moral principles (Batson, Kobrynowicz, Dinnerstein, Kampf, & Wilson, 1997). Recent studies from behavioral ethics provide insight as to how an individual is able to act against his or her moral standards while upholding the self-image that he or she is an ethical person. The concept of “bounded ethicality” emerged from this research to explain the discordance between one’s moral self-image and his or her ethical behavior.

Bounded ethicality is defined as the “systematic and predictable psychological processes that lead people to engage in ethically questionable behaviors that are inconsistent with their own preferred ethics” (Tenbrunsel et al., 2010, p. 7). These processes include inherent biases and heuristics that inhibit one’s ability to make an ethical decision (Chugh, Bazerman, & Banaji,

2005). Implicit forms of prejudice, in-group favoritism, and a tendency to overclaim credit are all specific examples of biases that researchers in behavioral ethics have used to illustrate the role of bounded ethicality in decision-making (Banaji, Bazerman, & Chugh, 2003; Bazerman, 2011). As these psychological tendencies operate at a subconscious level (Gino, Moore, & Bazerman, 2011), the most insidious aspect of bounded ethicality is that it allows the person to behave unethically without his or her awareness of doing so. This is accomplished through the mechanism of ethical fading wherein one's psychological constraints, (e.g., the activation of inherent biases) fade any moral considerations from the decision-making process (Tenbrunsel & Messick, 2004).

As usual with relatively new fields such as behavioral ethics, theoretical models are sparse (Tenbrunsel & Smith-Crowe, 2008). As such, Chapter 2 unified disparate theories and ideas from psychology and behavioral ethics as a means of constructing a theory that includes the concepts of bounded ethicality and ethical fading. What follows is an overview of that theory.

#### Distinction Between the System 1 and System 2 Components of the TUAB

The TUAB (Chapter 2) incorporates two distinct modes of cognitive processing, described by Kahneman (2011) as System 1 and System 2 thinking, to explain how unethical behavior may occur. System 1's primary function is to create connections among corresponding ideas of contexts, events, actions, and outcomes (Kahneman, 2011). These links help to establish a working model that allows one to understand his or her environment, create a narrative for the experiences of that person's life, and build future expectations. Kahneman (2011) defines System

1 thinking as automatic, intuitive, impulsive, effortless, and emotional. In other words, System 1 assesses stimuli “automatically and quickly, with little or no effort and no sense of voluntary control” (Kahneman, 2011, p. 20). As such, one’s intuitions of a particular context are essentially the creation of the primitive evaluations conducted by System 1. These intuitions, however, are prone to systematic errors (i.e., cognitive biases and heuristics) that are ingrained within System 1 and activated under certain conditions (Kahneman, 2011).

The primary function of System 2 is to monitor the intuitions, intentions, impressions, and feelings that are continuously suggested by System 1 (Kahneman, 2011). System 2 thinking, in contrast to System 1, is more deliberative and capable of reasoning and self-control (Kahneman, 2011). As such, System 2 is thought to be the final authority in decision-making because of its capacity to resist the suggestions of System 1. Although an individual who is able to utilize System 2 thinking when making a decision theoretically increases his or her chances of acting ethically (Bazerman & Tenbrunsel, 2011), this mode of cognition should not be viewed as a perfect model of rationality (Kahneman, 2011). This is because System 2 is “lazy,” meaning that it typically functions without exerting the effort necessary to weigh the ethical implications of a decision and, as a result, passively accepts the suggestions of System 1 (Kahneman, 2011). In addition, when System 2 is prompted to put forth more effort, it will often rationalize the emotions generated in System 1 and thus act more like an “apologist” for the affect-laden intuitions of that system rather than a critic (Kahneman, 2011). Furthermore, a problem exists in that System 2’s evaluations are dependent on System 1’s biased interpretation of contextual stimuli.

Findings from research across psychology (e.g., Alter, Oppenheimer, Epley, & Eyre, 2007) and accounting (e.g., Farrell, Goh, & White, 2014) support Kahneman's (2011) dual-process conceptualization. However, the system of thinking under which the majority of unethical behavior occurs is an empirical question that is beyond the scope of this chapter. Bazerman and Tenbrunsel (2011), though, argue that managers often rely on System 1 given the hectic demands of their work environment. As such, this chapter tests the System 1 component of the TUAB (Chapter 2) as an explanation for unethical behavior (i.e., fraud). If System 2 actually explains the majority of unethical actions, then we would expect to see the same emotions and biases activated in similar contexts. The key difference is that we would expect to observe more cognitive effort in one's decision-making under System 2.

#### Overview of the System 1 Component of the TUAB

TUAB (Chapter 2) argues that, under System 1 thinking, contextual stimuli, both quasi-static factors such as one's organizational environment and other, situational or task-specific elements, interact to instigate certain biases and heuristics. Egocentric biases that function to maintain one's sense of self-worth are particularly vulnerable to provocation by such stimuli. The need to protect one's self-image may result in a distorted interpretation of stimuli which will favor a preferred outcome (Messick & Sentis, 1983) and/or create the perception that the solution which benefits him or her is the most "fair" (Tenbrunsel & Smith-Crowe, 2008). These automatic and primitive evaluations happen so rapidly and effortlessly that a person's interpretations and perceptions may not feel biased or skewed in any way (Bazerman & Banaji, 2004).

Not only are contextual stimuli interpreted in a biased, egocentric manner, but they may also generate an emotional response in a person (Slovic, 1999). TUAB (Chapter, 2) argues, as an example, that a manager's sense of competency may feel threatened if he or she is unlikely to meet a key organizational goal such as meeting analysts' expectations. If engaging in an unethical act alleviates any negative emotions experienced in a particular situation, then the individual's affect-laden intuition is inclined to suggest that such an act is "good" or, at least, suitable, in that it is the most emotionally satisfying. The individual is thus likely to depend on an affect heuristic wherein negative emotions serve as the basis to guide his or her decision. As such, he or she automatically substitutes a difficult question (what is the ethical or proper action?) with an easier one (how would this particular option make me feel?). Ethical fading has occurred at this point as the moral implications of each alternative decision are not considered, thus increasing the likelihood of the person engaging in unethical behavior. *Figure 3* represents TUAB (Chapter, 2). The remainder of this section elaborates upon this model and utilizes it to make predictions about whether inferior positions of income/wealth increase a manager's probability of committing financial statement fraud.

### Contextual Stimuli and Biases/Heuristics

Gino and Pierce (2009) argue that his or her environment influences one's ethical actions. Semi-static, environmental factors such as reward systems (e.g., Hegarty & Sims, 1978), norms and culture (Treviño, Butterfield, & McCabe, 1998), and codes of conduct (Cressey & Moore, 1983) have been shown to affect ethical conduct within organizations (Gino & Pierce, 2009). In addition, Kern and Chugh (2009) demonstrate that situational, or task-specific, stimuli such as

time pressure may influence one's ethical behavior. TUAB (Chapter 2) contends that both types of factors interact to elicit particular biases and heuristics. In turn, the provocation of these biases and heuristics results in the individual evaluating and interpreting the contextual stimuli not through his or her moral lens, but in a self-interested manner which is context-dependent.

Research suggests that people have difficulty interpreting stimuli in an unbiased way (Babcock & Loewenstein, 1997; Diekmann, Samuels, Ross, & Bazerman, 1997). An individual's assessment, and the subsequent weighting, of environmental information are governed by egocentric biases which are designed to maintain the person's sense of self-worth, such as the need to see him or herself as moral, competent, and deserving (Chugh, Bazerman, & Banaji, 2005). The need to preserve one's self-worth can lead to a distorted interpretation of stimuli which supports the individual's preference for a particular outcome (Messick & Sentis, 1983) and/or results in the perception that the most beneficial for him or her is the most "fair" (Tenbrunsel & Smith-Crowe, 2008). As one automatically and effortlessly processes information egocentrically (Epley & Caruso, 2004), that is, evaluates contextual stimuli on the basis of how those factors affect the person's sense of self-worth, his or her perceptions may not feel biased or distorted in any way (Bazerman & Banaji, 2004).

#### Application of TUAB (Chapter 2) to inferior positions of income/wealth

General Strain Theory posits that the stress from one's social environment to achieve material success can motivate an individual to take part in criminal activity (Langton & Piquero, 2007). This stress, and the succeeding inducement towards criminal behavior, is the result of a social comparisons process. The Self-evaluation Maintenance Model, along with other social

comparison theories (e.g., Festinger, 1954), suggests that one compares his or her abilities to others to maintain or improve evaluations of the self (Tesser, 1988). According to Pfeffer and Langton (1988), research indicates that employees form reactions to the distribution of rewards or wealth they receive from such comparisons (e.g., Alwin, 1987). Specifically, an individual will weigh the distribution of resources by considering both the economic utility of his or her share of rewards or wealth and the social utility generated from the comparisons (Messick & Sentis, 1985). With respect to executive management, in particular, researchers have started to investigate CEO reactions to their pay relative to the labor market in which they participate (Fong, 2010).

Kuhnen & Tymula (2012) argue that prior research by Frank (1984), for example, demonstrates that people are concerned about social status as defined by their wealth relative to others. This may be especially true for CEOs. Fong (2010), citing Porac, Wade, and Pollack (1999), states that “the complex causes of organizational outcomes can motivate, or even necessitate, social comparisons by CEOs and thus they could recognize the going labor market rate for their services and possible deviations from such rates” (p. 1099). As such, CEOs will compare their pay against other CEOs (Fong, 2010) since individuals typically evaluate themselves against others who possess similar abilities (Goodman, 1974). Compensation schemes are argued to be important to managers in that they are a reflection of their competence and importance (March 1984). Thus, an executive whose pay is relatively lower than others in the same labor market may view this as a threat to his or her competency, thus motivating that CEO to behave in ways that lead to higher pay (Fong, 2010). This motivation may stem from the executive’s biased perception of what he or she considers fair compensation.

Gino and Pierce (2009) contend that researchers have built on Adams' (1965) equity theory by demonstrating that people judge the fairness of a given setting by comparing their ratio of inputs to outcomes with those of referent others. However, Wade-Benzoni and Tost (2009) cite an extensive body of research demonstrating peoples' propensity towards "egocentric interpretations of fairness," wherein a person's judgment of fairness is biased in a self-serving manner despite the belief that his or her judgment is objective (e.g., Diekmann et al., 1997; Epley & Caruso, 2004; Messick & Sentis, 1979, 1983; Ross & Sicoly, 1979; Wade-Benzoni, Tenbrunsel, & Bazerman, 1996). Furthermore, as discussed in Samnani, Salamon, and Singh (2013), researchers have found that perceived injustice/unfairness (Cohen-Charash & Mueller 2007; Hershcovis et al., 2007; Jones 2009) is related to counterproductive work behaviors.

Translating these concepts into the terminology of bounded ethicality, a manager will compare his or her earnings to others in the same labor market. If his or her earnings are relatively lower, then this process of social comparison is a contextual stimulus that may threaten the manager's own feelings of competency. In turn, the manager will egocentrically interpret stimuli in a way that reassures his or her managerial abilities. That is, the manager will manufacture the perception that the lower pay is a result of an unfair situation rather than his or her inferior competency. As such, the first hypothesis is stated as:

*H1: A manager who compares his or her earnings to a higher-paid referent will perceive the disparity as more unfair than a manager who compares his or her earnings to a lower-paid referent*



## Biases/Heuristics and Affect-laden Intuition

TUAB (Chapter 2) postulates that provoking egocentric biases also triggers negative affect in addition to distorting one's perceptions of stimuli. When an individual's sense of self-worth is threatened, he or she will be motivated to diminish any negative emotion quickly without engaging in a deliberate thought process (Kahneman, 2011). Thus, as visceral impulses typically dominate during decision-making (Loewenstein, 1996), the individual may rely on his or her "affect-laden intuition" (i.e., gut feeling) to evaluate whether a potentially unethical behavior is appropriate in a given situation (Murphy & Dacin, 2011). As such, one might employ an "affect heuristic," a mental shortcut whereupon the person's intuition, formed by the quick and automatic emotions that precede cognition, serves as a basis to inform his or her behaviors and/or decisions (Bazerman & Chugh, 2006; Finucane, Alkhami, Slovic, & Johnson, 2000).

### Application of TUAB (Chapter 2) to inferior positions of income/wealth

As discussed in Blanchflower and Oswald (2011), the idea that one's subjective well-being is dependent on relative factors like income dates back to Duesenberry's (1949) "relative-income hypothesis" and continues through modern research such as Clark and Senik (2010) and Layard (2010). Consistent with this idea is relative deprivation theory, which suggests that an individual will feel less happy as his or her earnings fall in comparison to a particular referent (Clark & Oswald, 1996). Empirically, Frank (1999, 2007) has demonstrated that one's relative wealth standing, as opposed to absolute net worth, is a stronger predictor of his or her well-being and Clark and Oswald (1996), for example, found an inverse relationship between U.K. workers' reported level of satisfaction and their comparison wage rates. As discussed above, one who

earns less than a particular referent will egocentrically interpret this situation as unfair and will react negatively (Nickerson & Zenger, 2008). Envy, along with unhappiness, is a probable reaction to a person's inferior position of income/wealth.

Smith and Kim (2007) define envy as "as an unpleasant, often painful emotion characterized by feelings of inferiority, hostility, and resentment caused by an awareness of a desired attribute enjoyed by another person or group of persons" (p. 46). Nickerson and Zenger (2008) state that "varying perspectives on social comparison and disparity perceptions are consistent with the notion that individuals are envious of salient referents perceived to receive superior income relative to their contributions" (p. 1434). Cohen-Charash and Mueller (2007) explain that envy occurs in social comparisons when Person A recognizes that Person B has an object or trait (e.g., material or personal) that Person A desires but does not possess, and that object or trait is important to Person A's self-concept. Specifically, Cohen-Charash and Mueller (2007) continue, the feeling of envy threatens one's self-perception since it is an acknowledgement of his or her inferiority relative to another. Furthermore, the "comparison component" of envy is related with behaviors intended to improve one's position. A similar argument is applicable to the reactionary behaviors of executive management to income/wealth inequalities. Goel and Thakor (2010), for example, support their claim that higher-earning CEOs who increase their pay through mergers and acquisitions induce envy among lower-earning CEOs, who, in turn, are motivated to increase their salaries through acquisitions.

Translating these ideas into the terminology of bounded ethicality, a manager will compare his or her pay to others in the same labor market. If his or her earnings are lower, then this process of social comparison may serve as a contextual stimulus that endangers the

manager's own sense of self-worth. Thus, the manager will egocentrically interpret stimuli in a way which manufactures the perception that his or her lower pay is a result of an unfair situation rather than his or her own inferiority. In addition to egocentrically interpreting this situation as unfair, the threat to the manager's sense of self-worth is also expected to elicit negative affect, specifically, envy. As such, the second hypothesis is stated as:

*H2: Perceptions of unfairness regarding pay are positively related to feelings of envy.*

#### Affect-laden Intuition, Ethical Fading, and Unethical Behavior

As discussed earlier, an individual faced with a dilemma will be motivated to reduce any negative affect without engaging in a slow, effortful thinking process (Kahneman, 2011). As such, visceral responses tend to dominate during decision-making (Loewenstein, 1996). The individual, as a result, will both rely on his or her affect-laden moral intuition to determine whether a potentially unethical action is acceptable and employ an affect heuristic to guide the decision-making process.

Haidt (2001) contends that quick intuition often precedes moral judgment. This may be due to the affect heuristic. Kahneman (2011) argues that the affect heuristic is an instance of substitution where a more cognitively taxing question (e.g., what is the most ethical decision?) with an easier one (e.g., how would engaging in this action make me *feel*?). As such, how the individual feels towards the decision alternatives will determine whether ethical fading will occur (Chapter 2).

Kahneman (2011) maintains that people are overconfident in their intuitions formed from automatic processes such as the affect heuristic. Thus, as reasoned from TUAB (Chapter 2) a

conscious, reasoned decision to forsake one's ethics is not necessarily driving his or her unethical behavior. Instead, a person's behavior in an ethical dilemma is more of an "emotional reflex" that is governed by biased and automatic cognitive processes. Consequently, if an unethical act may relieve any negative affect experienced in a particular dilemma, then the individual's affect-laden intuition is likely to suggest that such an act is "good" or, at least, appropriate, in that it is the most emotionally attractive (Chapter 2). The desire to appease visceral impulses may result in ethical fading wherein the "moral colors of an ethical decision fade into bleached hues that are void of moral implications" (Tenbrunsel & Messick, 2004, p. 224). Finally, TUAB (Chapter 2) postulates that the fading of ethical considerations in a dilemma increases the probability of one engaging in unethical behavior without the person's awareness that he or she is doing so.

#### Application of TUAB (Chapter 2) to inferior positions of income/wealth

Gino and Pierce (2009) state that feelings of envy lower one's job-related esteem which, in turn, motivates the person to rectify the situation. As such, envy can have a significant influence on an individual's ethical behavior. Supporting this claim, Gino and Pierce (2009) discuss research that suggests one's feelings of envy may lead to deception, decreased cooperation, and overt hostility (Brigham, Kelso, Jackson, & Smith, 1997; Duffy & Shaw, 2000; Feather, 1989, 1991; Moran & Schweitzer, 2008; Parks, Rumble, & Posey, 2002). However, research indicates that some form of ethical fading may play a key role in the link between envy and unethical behavior. Samnani et al.'s (2013) findings suggest that moral disengagement, a concept related to ethical fading, moderates the relationship between negative affect and

counterproductive work behaviors.<sup>10</sup> Additionally, a multilevel study of student teams indicates that envy has an indirect effect on social undermining through moral disengagement (Duffy, Scott, Shaw, Tepper & Aquino, 2012).

Applying TUAB (Chapter 2), a manager who earns less than referent others will be motivated to reduce the envy created from social comparisons. As such, the manager will rely on his or her affect-laden moral intuition to determine whether a potentially unethical act is suitable and will utilize an affect heuristic to guide the decision making-process. The manager will then automatically substitute a difficult question (what is the ethical or proper action?) with an easier one (how would engaging in this behavior make me feel?). At this point, ethical fading has occurred since the manager is no longer considering the ethical implications of his or her decision. Thus, the third hypothesis is stated as:

*H3: Feelings of envy are positively related to the likelihood of ethical fading.*

There is a dearth of empirical research on ethical fading since it is a relatively new concept. However, studies on moral disengagement support the hypothesized link between ethical fading and unethical behavior. For example, Deter, Treviño, and Sweitzer's (2008) results

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<sup>10</sup> The distinction between moral disengagement and ethical fading has yet to be established to the best of the author's knowledge. However, Moore, Detert, Treviño, Baker, & Mayer (2011) argue that Bandura (2002) conceptualizes moral disengagement as an individual trait wherein the propensity to employ mechanisms of disengagement vary across people. One may infer from this conceptualization that morally disengaging in an ethical scenario is a conscious strategy employed by the decision maker. Ethical fading, in contrast, is the effect of a subconscious process governed by biases inherent in all individuals. As such, there is not "conscious" decision to fade the implications from one's decision.

suggest a positive relationship between moral disengagement and unethical decision-making. In addition, Moore, Detert, Treviño, Klebe, Baker, and Mayer (2012) utilized experimental and field procedures to examine the effect of moral disengagement on various types of unethical conduct within organizations. Moore et al. (2012) found that one's propensity towards moral disengagement was a strong predictor of unethical behavior, such as the decision to engage in fraud, and more relevant than other antecedents of unethical behavior that are related to individual differences.

Translating these concepts into the terminology of bounded ethicality, a manager who earns less than referent others will employ an affect heuristic where the envy produced by social comparisons of pay/wealth serve as the basis to guide his or her decision. Thus, the manager will automatically substitute a difficult question (what is the ethical or proper action?) with an easier one (how does choosing this particular option make me feel?). Ethical fading, at this point, has transpired whereupon the manager's affect-laden intuition suggests the action that alleviates the envy experienced in this particular scenario is the most appropriate, including behavior considered unethical. When confronted with the opportunity to raise his or her compensation (i.e., acquire bonuses and/or stock options by meeting company goals) by engaging in financial statement fraud, a relatively lower-paid manager, as opposed to a higher-paid manager, is more likely to push beyond the acceptable boundaries of GAAP. This is because contravening GAAP would be the most emotionally appealing action since it adjusts for the manager's perceived unfairness of his or her inferior pay, eases his or her feeling of envy, and upholds his or her sense of self-worth. As such, TUAB predicts the following:

*H4: Ethical fading is positively related to the likelihood of engaging in unethical behavior (i.e., fraud).*

*H5: The relationship between pay disparity and unethical behavior (i.e., fraud) is mediated by perceived unfairness.*

*H6: The relationship between pay disparity and unethical behavior (i.e., fraud) is mediated by episodic envy.*

*H7: The relationship between pay disparity and unethical behavior (i.e., fraud) is mediated by ethical fading.*

## Methods

The hypotheses were tested utilizing a 1 x 2 between-participants design. Random assignment directed the participants into one of two conditions consisting of a low-pay group (LPG) and a high-pay group (HPG). The experiment is a modified version of the procedure employed in Schwartz and Wallin (2002) where the participant's task, across all groups, is to sell an "asset" to a computerized buyer. In brief, the participants had to decide how to disclose the quality of the asset and determine its price before selling it to the buyer. Participants retained a percentage of the money received for the price at which an asset was sold. As such, there existed an incentive for the participants to misrepresent lower quality assets as higher in that selling assets disclosed as high quality could have resulted in a larger payout for them.

### Experimental Procedure

What follows is a detailed explanation of the experimental procedure. The participants interfaced with a computer for all aspects of the experiments, except when receiving their cash payout from the experimenter. *Figure 4* shows the chronological order of the procedure.

### Step 1: Role assignment and instructions regarding experiment

The experiment began with the participants being informed that they had been assigned the role of sellers with corresponding identification numbers. The study administrator then asked the participants what role they were assigned while shuffling through two sets of color-coded instructions. The purpose of this action was to intimate that other role assignments, such as a buyer, were possible.<sup>11</sup> The instructions were then read aloud by the study administrator. First, the participants were advised to raise their hand if they had any questions regarding the instructions. The instructions then stated that the task, for 25 rounds, is to sell the assets to potential buyers. Next, the participants were told that they would be provided with information regarding the names, qualities, and value-ranges of assets to be sold to potential buyers. For example, the participants may be given an *Epsilon* asset of average quality with an assessed value between 400 to 500 Credits.<sup>12</sup> In addition, they were notified that determining an asset's quality and value-range is subjective.

With respect to the asset-selling task, the instructions stated that the participants must determine both the price of the asset and how to disclose its quality before they are matched with a buyer. For example, if the participant is given an *Epsilon* asset of average quality with a value between 400 to 500 Credits, then he or she could change its "average quality" designation to

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<sup>11</sup> An open-ended question was asked regarding the participants' opinions as to where the sellers were located. Of the 75 individuals who participated, only 5 suggested that the buyers were part of a computer program. These participants' responses were included in the analysis since the difference in the results between including and excluding their data was insignificant.

<sup>12</sup> A Credit is a fictional currency.



“above average” if he or she feels that the assessment was inaccurate. The value-range of the asset moved in conjunction with any changes to the asset quality. As such, changing an asset of “average quality” to “above average” in the example above would have shifted the value-range from 400 to 500 Credits to 450 to 550 Credits. The participants were then instructed that they must determine a price, within the value-range, at which to sell the asset (e.g., 550 Credits). Finally, the participants were advised that the others taking part in this study did not have access to any information regarding their decisions about pricing an asset and disclosing its quality.

The participants were subsequently advised that their offers could be declined. Next, the participants were told that the buyer could purchase an audit for any transaction immediately following the sale of an asset. Specifically, the instructions stated that all transactions could be subjected to an audit with variable success rates of detection. For example, the probability of a successful detection for a “poor quality” asset disclosed as “excellent quality” was higher than that same asset disclosed as “average quality.” Furthermore, the participants were informed that a successful audit, that is, one that detected a misrepresentation of quality, would result in a fine of 1000 Credits in addition to the relinquishment of any Credits gained from the previous transaction.

The participants were then advised that they would be prompted to answer a question after the instructions are read and the response to this question could determine their rate of pay for the experiment. Next, the participants were informed that they would be asked to complete a survey after the 13<sup>th</sup> round of transactions and finish a “word completion” exercise after the final round, for which additional Credits could be earned. The participants were also notified that any Credits earned from both the asset-selling task (minus any assessed penalties) and the word

completion exercise would be converted to US dollars and paid out upon completion of the experiment. The conversion rate of Credits to US dollars was not provided, but the participants were informed that the rate is positive.<sup>13</sup> The participants were then told that they would be asked to write down their identification numbers, place them into an envelopes, and bring those envelopes to the experimenter for payment at the end of the study. Finally, the participants were asked to confirm that they understand the task and click the “Begin Task” link on the computer screen. A list of the instructions is located in *Appendix C*.

#### Step 2: Group assignment and manipulation check

Following the instructions, the participants were asked to select their preference for one of two given images (i.e., patterns of lines with no extrinsic meaning) and advised that this decision may play a role in determining their pay rate, and thus their potentials earnings, for the experiment. Before selecting one of the two images, however, the participants were prompted to click a box acknowledging that they understand the possible link between his or her preference and pay rate. The actual assignment to conditions was random. The participants were then routed to a new screen that provided their group assignment, which was either to the LPG or HPG. In addition, the participants were notified of their pay rate for the experiment. That is, for each successful transaction, those in the LPG would receive 25 percent of an asset’s sales price whereas those in the HPG would collect 50 percent. Finally, the participants were prompted to answer a manipulation question regarding their group assignment and rate of pay.

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<sup>13</sup> The conversion rate was 1 Credit equals 0.005 US Dollars.

### Step 3: Asset quality information

The task of selling assets began as the participants were given information regarding the asset. In particular, they were provided its name, quality, and value range.<sup>14</sup> For each round, the asset's information was the same for all participants. In addition, there was a disclaimer stating that determining the asset's actual quality and value-range is subjective. Furthermore, there was a header at the top of the screen showing the current round, the total amount of Credits the participant had earned, and the participant's identification number and group assignment. This header was constant throughout the asset-selling task. Another icon showing the date, time, and the number of "buyers" online (a random number between 700 and 799) was also shown at the top of the screen throughout the asset-selling task.

### Step 4: Disclosing and pricing of asset

Next, the participants had to decide how to disclose the value of the asset to a potential buyer and determine its price. Once finished, the participants were prompted to enter "the marketplace" to sell their asset.

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<sup>14</sup> Each asset is named after a letter in the Greek alphabet (e.g., "*Epsilon*"). The letters *Alpha*, *Beta*, and *Omega* are not used as they may imply a position within a hierarchy or a value in relation to another. There are five quality designations, which are "poor," "below average," "average," "above average," and "excellent."

#### Step 5: Sale of asset

Once in the marketplace, the participants were told that Buyer X, with the X representing a random letter and three-digit number, either purchased or declined to buy the asset. The buyer was an algorithm within *Qualtrics* set to where each transaction has an 80 percent probability of success and, accordingly, a 20 percent chance of failure. It is important to note, however, that the participants were not told the buyer was an algorithm. In fact, no information was provided about the buyers. The intent with limiting the participants' information regarding the buyer, along with establishing the possibility of an unsuccessful sale, was to create the impression that the sellers were transacting with a human counterpart. After each successful transaction, the participants' balances were updated to reflect the Credits received from the sale of the asset.

#### Step 6: Audit of transaction

An algorithm determined whether an audit was conducted and, if so, its success in detecting a misrepresentation of an asset's quality. The chance of an audit occurring was 25 percent regardless of whether, and to what degree, the participants misrepresented their assets. However, if an audit transpired, then the degree to which the participant misreported the asset's quality determined the likelihood of a successful detection. Specifically, the probability of detection increased by a constant 20 percent for each level of quality reported beyond that which was given. For example, if the participant was given an asset of poor quality and an audit followed its sale, then he or she would have faced a 20, 40, 60, or 80 percent probability of detection had the asset been disclosed as below average, average, above average, or excellent, respectively. Whether or not an audit did occur and, if so, its results were communicated to the

participants. The participants were informed about both the penalty (1000 Credits) they must pay and the loss of Credits from the previous transaction if an audit effectively detected a misrepresentation. Finally, the round ended after the participants' earnings were updated to reflect any assessed penalty. Steps 3 through 6 were repeated for another 12 rounds.

#### Step 7: Zodiac and Personality Survey

After the 13<sup>th</sup> round of transactions, the participants were informed that their accumulated Credits thus far place them in the top (HPG) or bottom tier (LPG) of earners, respectively.<sup>15</sup> Next, the computer prompted the participants to complete a variation of the Zodiac and Personality Survey utilized by Gino and Pierce (2009). This survey asked personality and demographic questions as a means of obfuscating the measures related to the participants' feelings of envy, egocentric perceptions of unfairness, and ethical fading. The survey's questions that were not related to envy, perceptions of fairness, and ethical fading are modified versions of those found in the Big Five personality instrument from John and Srivastava (1999). Consistent with Gino and Pierce (2009), the instructions provided basic information about the Zodiac and stated that research shows a relationship between one's judgments and his or her sign. Finally, the participants were asked to indicate their Zodiac sign and then answer questions related to their personalities, preferences, and emotions. The Zodiac and Personality Survey is located in *Appendix D*.

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<sup>15</sup> The prompt that the participants were given was independent of their actual performance. Those in the HPG were advised that they were in the high-tier of earners whereas those in the LPG were told that they were in the lower-tier.

#### Step 8: Resume the sale of assets

Steps 3 through 6 are repeated for the remaining 12 rounds (rounds 14 through 25).

#### Step 9: Word completion task

After the 25<sup>th</sup> and final round of transactions, the participants were instructed to finish a word completion task. The word completion task was employed to measure ethical fading. Consistent with prior studies (Gino, Schweitzer, Mead & Ariely, 2011; Shu, Mazar, Gino, Ariely, & Bazerman, 2012), the participants were provided with a list of eight word fragments, five of which could have been completed using words related to ethics. For example, the participants could have finished the fragment “TR\_ \_ \_” with the word “trust.” However, the participants may also have used a neutral word such as “trunk.” The participants were advised to fill in the blanks using the first word that came to their mind and that no one answer was correct. In addition, the participants were informed that they would be awarded an additional 250 Credits for any completed word fragment. Finally, the words were presented individually for which the participants were provided with only 45 seconds to complete the fragment. The word completion task is listed in *Appendix E*.

#### Step 10: Demographic data

Upon finishing the word completion task, the participants responded to a questionnaire that captures demographic data such as gender, major, GPA, and the number of account-related courses each participant has taken. The demographic questionnaire is listed in *Appendix F*.

### Step 11: Experiment ends and the participant is paid

Upon finishing the word completion task, the participants were advised that the experiment had ended. The participants were then instructed to write down their selling numbers, place them into envelopes, and bring those envelopes to the experimenter for payment. Finally, the experimenter translated the earned Credits into US dollars and the participants were paid.

#### Manipulated Variable

There was one manipulated variable, pay rate. Random assignment directed each participant into one of two conditions consisting of a low-pay group (LPG) and a high-pay group (HPG). Participants were informed of both their group assignment and respective pay rate after responding to a prompt asking them to choose between one of two images consisting of different line patterns. Those in the HPG received 50 percent of an asset's sales price whereas those in the LPG collected 25 percent. After the 13<sup>th</sup> round of selling assets, the participants in both the HPG and LPG were informed that their accumulated Credits thus far place them in either the top or bottom tier of earners, respectively.

#### Measured Variables

There were four measured variables in this study, which are perceptions of unfairness, episodic envy, ethical fading, and fraud (misrepresentation).

### Perceptions of unfairness

Perceived unfairness was captured using a modified version of Smith, Parrott, Ozer, and Moniz's (1994) Objective Injustice Beliefs Scale. The four items that comprise the scale are as follows:

1. "An objective judge who knows the facts would agree that the people in the higher tier of earnings do not deserve those earnings."
2. "Anyone would agree the people in the higher tier of earnings had an advantage that was unfairly obtained."
3. "The people in the higher tier of earnings achieved their advantage through unjust actions or unjust procedures."
4. "An objective judge who knows the facts would agree that the people in the higher tier of earnings are there mostly due to luck."

The items were rated on the degree to which the participant agrees or disagrees with the situation, with the scale ranging from 1 (strongly disagree) to 5 (strongly agree). A higher score indicates the participant perceived the situation as more unfair.

Cohen-Charash and Mueller (2007) utilized a similar version of the Objective Injustice Beliefs scale. They argue that Smith et al.'s (1994) scale was developed explicitly to measure unfairness in situations involving envy. In addition, this scale operationalizes the "monistic view" of fairness (Cropanzano & Ambrose, 2001) in that it examines overall unfairness perceptions rather than a specific type (Cohen-Charash & Mueller, 2007). The items measuring overall unfairness perceptions were embedded within the Zodiac and Personality Survey.

### Episodic envy

Episodic envy was measured using a modified version of the scale developed in Cohen-Charash (2009). The seven items that constitute the measurement are as follows:



1. "I feel envious now."
2. "I feel bitter now."
3. "I feel irritated now."
4. "I feel resentful now."
5. "I lack some things others here have."
6. "I feel resentment toward those here who have more than I do."
7. "Others here have more things going better for him/her than I do."

The items were rated on the degree to which the participant agrees or disagrees with the situation, with the scale ranging from 1 (strongly disagree) to 5 (strongly agree). A higher score indicates the participant was experiencing a higher degree of envy.

Gino and Pierce (2009) utilized a similar measurement of episodic envy. Cohen-Charash (2009) argues that episodic envy is composed of both a "feeling" component and a "comparison" component. As such, Cohen-Charash (2009) developed and validated the episodic envy measure across three studies. Questions 1 through 4 capture the feeling component of envy whereas questions 5 through 7 represent its comparison component. The items measuring envy are embedded within the Zodiac and Personality Survey.

### Ethical fading

There were two separate ethical fading measurements. The first is a modified version of the one-item scale utilized in Kouchaki, Smith-Crowe, Brief, and Sousa (2013). An additional two measures were added for the purpose of creating a more robust measurement. The questions are as follows:

1. "The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily economic decisions."
2. "The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily financial decisions."
3. "The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily business decisions."

The items were rated on the degree to which an individual agrees or disagrees with the scenarios, with the scale ranging from 1 (strongly disagree) to 5 (strongly agree). Kouchaki et al.'s (2013) adapted this measure from Tenbrunsel and Messick (1999) to capture how one frames his or her decision to lie in a deception game. If a person sees the decisions in this task as primarily economic in nature (i.e., adopts an economics frame), then it conceptually follows that ethical considerations have faded from his or her decision-making. As such, higher scores represent a higher degree of ethical fading. This first measure of ethical fading was contained within the Zodiac and Personality Survey.

Ethical fading was also measured by the participants' performances in a word completion task. The participant was given a list of eight word fragments, five of which might have been completed using words related to ethics. The participants were prompted to fill in the blanks using the first word that came to their minds and that no one answer is correct. In addition, the participants were informed that they would be awarded an additional 250 Credits for any completed word fragment. Finally, the words were presented separately and the participants were allowed only 45 seconds to complete the fragment. The eight words used in this experiment were as follows:

1. "M O \_ \_ \_ \_"
2. "V I \_ \_ \_ \_"
3. "E T \_ \_ \_ \_ \_"
4. "H O \_ \_ \_ \_ \_"
5. "T R \_ \_ \_ \_"
6. "R A \_ \_ \_ \_"
7. "C H \_ \_ \_ \_ \_"
8. "B I \_ \_ \_ \_"

Word fragments 1 through 5 are words that can be completed using either an ethics-related word (e.g., “MORAL,” “VIRTUE,” “ETHICAL,” “HONEST,” and “TRUST”) or a neutral term (e.g., “MURAL,” “VIOLET,” “ETERNAL,” “HOUSES,” and “TRACK”). Fragments 6, 7, and 8, however, cannot be completed with an ethics-related word. A higher degree of ethical fading was represented by fewer uses of ethics-related words.

Several studies have utilized word completion tasks to measure “moral awareness” (e.g., Gino & Bazerman, 2009; Gino et al., 2011; and Shu et al., 2012). Gino et al. (2011) argue that the ethical implications of a situation are not salient when a person’s moral awareness is impaired. This is due to the individual’s difficulty in accessing the ethical decision-making script necessary to act honestly in situations involving the opportunity to cheat for money. As such, ethical constructs are less likely to be prominent in one’s mind when an ethical decision-making script is inaccessible. As reviewed in Gino and Bazerman (2009), research suggests that word completion exercises measure implicit cognitive processes (Bassili & Smith, 1986; Tulving, Schacter, & Stark, 1982). Thus, such exercises may function as an implicit measure of a person’s ability to retrieve ethical concepts.

### Fraud

The participant’s decision to misrepresent the quality of the asset served as a proxy for his or her willingness to engage in fraudulent behavior. Fraud was measured by the frequency at which the participant misrepresented an asset in rounds fourteen through eighteen. The reason these particular rounds were used is because they follow the Zodiac and Personality Survey, which itself occurs immediately after the participant was informed that his or her accumulated

Credits thus far place them in the top (HPG) or bottom tier (LPG) of earners, respectively. Considering that emotions fade, the rounds immediately following the survey are when the feelings of the participant with respect to his or her earnings are the most intense.

### Control Variable

Gender was included as a control variable in this study. The reviews of the ethical decision-making literature indicate that the relationship between gender and ethical behavior is mixed (Craft, 2013; O’Fallon & Butterfield, 2005; Tenbrunsel & Smith-Crowe, 2008). As discussed in Tenbrunsel and Smith-Crowe (2008), some studies suggest that women make more ethical judgments (e.g., Reiss & Mitra, 1998), some, albeit fewer in number, show men making more ethical determinations (e.g., Weeks, Moore, McKinney, & Longenecker, 1999), and the others find no gender differences with respect to ethical decision-making (e.g., Abdolmohammadi, Read, & Scarbrough, 2003). O’Fallon and Butterfield (2005) conclude that the more recent literature has consistently failed to demonstrate any gender variations. However, they, along with Tenbrunsel and Smith-Crowe (2008), state that females tend to be more ethical than males when differences are found. Tenbrunsel and Smith-Crowe (2008) believe that gender does have an influence on ethical decision-making and argue that the inconsistent findings across studies may be the result of the differences between the contexts of those studies. As such, gender could have an impact on the decision to engage in fraud, especially when considering that men comprise the biggest percentage of those who commit fraud (ACFE, 2012).

## Results

### First Analysis

#### Participants

The participants were recruited from several upper-level, undergraduate business courses (e.g., Financial Management, Legal Environment of Business, and other core business classes) at a public university in the northeast United States. A total of 75 students participated in the experiment, which was carried out over two separate sessions. The participants, on average, spent 23 minutes completing the experiment and were paid a total of \$6.15, which included a flat fee of \$3 that was independent of their performance. The demographic data in *Table 1* show that the sample consisted of 48 males (64.0 percent) and 27 females (36.0 percent). Several business majors were represented, with most of the participants identifying as either accounting or marketing students (28.0 percent and 20.0 percent, respectively). Finally, 57 students (76.0 percent) reported their GPA as being at 3.0 or above.

#### Manipulation check

After the participant's assignment to either one of the two conditions (LPG or HPG), he or she was prompted to answer a manipulation check question regarding his or her group assignment. Specifically, the question asked the participant to which pay group he or she had been assigned based on his or her choice of pattern. All 75 participants passed the manipulation check.

## Hypotheses testing

*H1* predicts that a person who is paid less will see this disparity in pay as more unfair than one who is paid more. To test this hypothesis, an ANCOVA was conducted using *Group* as the predictor/independent variable (Coded as 0 = HPG, 1 = LPG), *Perceived Unfairness* as the outcome/dependent variable, and *Gender* as the lone covariate (Gender, coded as 0 = female, 1 = male). Since higher scores on the *Perceived Unfairness* questions indicate that the participant viewed the situation (i.e., the pay disparity) as more unfair, the LPG was expected to have a higher mean on this measure than the HPG. The results listed in *Table 2 (Panel A)* reveal that the LPG's mean score for the *Perceived Unfairness* measure (*Mean* = 2.61, *SD* = 0.73) was higher than that of the HPG (*Mean* = 2.45, *SD* = 0.83). However, the results in *Table 2 (Panel B)* show that this difference was insignificant (*p* = .28). Thus, *H1* is not supported.

The remaining six hypotheses were tested utilizing the PROCESS add-in to SPSS. PROCESS is a statistical method that allows testing for “path analysis–based moderation and mediation analysis as well as their integration in the form of a conditional process model” (Hayes, 2013, p. 419). In particular, PROCESS has the ability to test serial multiple mediator models such as the theoretical framework in this chapter. In addition to its capacity to calculate the direct and indirect effects in mediation models, PROCESS can estimate unstandardized model coefficients, standards errors, *t*-values, *p*-values, and confidence intervals utilizing either OLS regression (for continuous outcomes) or maximum likelihood logistic regression (for dichotomous outcomes) (Hayes, 2013).

*H2* posits that perceptions of unfairness regarding pay are positively related to feelings of envy. That is, one is expected to experience a higher degree of episodic envy if he or she views a

situation as more unfair than another. PROCESS was used to test this hypothesis with *Group* (Coded as 0 = HPG, 1 = LPG) as the predictor/independent variable, *FCL5* (number of frauds committed in rounds 14 through 18) as the outcome/dependent variable, *PU* (perceived unfairness) as the first mediating variable, *EE* (episodic envy) as the second mediating variable, *EFQ* (ethical fading questions) as the third mediating variable, and *Gender* (gender, coded as 0 = female, 1 = male) as the single covariate. Similar to the interpretation of the *PU* measure, higher scores on the *EE* measure indicate a greater degree of episodic envy. As such, a positive coefficient was anticipated. The results in *Table 3 (Panel A)* indicate that when *EE* is designated as the outcome variable, its relationship with *PU* is positive (coeff. = 0.31) and significant ( $p < .05$ ). Therefore, *H2* is supported.

*H3* postulates that feelings of envy because of pay disparity are positively related to the likelihood of ethical fading. More specifically, a person is expected to be less likely to consider the ethical implications of his or her decision if he or she is experiencing a greater degree of episodic envy than another. A positive coefficient is expected since higher mean scores on the *EFQ* questions suggest a greater degree of ethical fading. The results in *Table 3 (Panel B)* show that the relationship between *EE* and *EFQ* is positive (coeff. = 0.03), but not significant ( $p = .85$ ), when *EFQ* is designated as the outcome variable. Thus, *H3* is not supported.

Ethical fading was also measured by the participant's performance on a word completion task (labeled *EFW*). As such, a second analysis was conducted substituting *EFQ* for *EFW*. Since the use of more ethics-related words indicates less ethical fading, *EFW*'s relationship with *EE* is expected to produce a negative coefficient. The results listed on *Table 4 (Panel A)* do reflect a

negative (coeff. = -0.06), but insignificant ( $p = .56$ ), relationship. Thus, *H3* is still not supported when *EFW* is employed as an alternative ethical fading measure.

*H4* states that there is a positive relationship between ethical fading and unethical behavior. In other words, one who experiences a higher degree of ethical fading is predicted to be more likely to engage in fraud. As *FCL5* captures the number of frauds the participant committed in rounds 14 through 18, its relationship with *EFQ* is expected to produce a positive coefficient. The results from *Table 3 (Panel C)* reflect that the relationship between *EFQ* and *FCL5* is positive (coeff. = 0.25), but insignificant ( $p = .22$ ), when *FCL5* is specified as the outcome variable. Thus, *H4* is not supported when *EFQ* is used as the ethical fading measure. When *EFW* is substituted for *EFQ* as presented in *Table 4 (Panel B)*, the relationship between fraud and ethical fading is still not significant ( $p = .73$ ). Although not hypothesized, it is interesting to note that *Gender* has a significant relationship with *FLC5* ( $p < .05$ ). The positive coefficient (coeff. = .81) indicates that men were more likely to misrepresent than women, which is consistent with the research that suggests women are more ethical when gender differences are present (see O'Fallon & Butterfield, 2005; Tenbrunsel & Smith-Crowe, 2008).

*H5* predicts that perceived unfairness mediates the relationship between pay disparity and unethical behavior. In more precise terms, a person who compares his or her pay to a higher-paid individual is anticipated to view the disparity as more unfair than one who compares his or her earnings to a lower-paid referent, thus increasing the probability of that individual engaging in fraudulent behavior holding episodic envy and ethical fading constant. The results reported in *Table 5 (Panel A)* show that the indirect effect of pay disparity (*Group*) on unethical behavior (*FCL5*) through perceived unfairness (*PU*) is not statistically significant with the bootstrapped



confidence intervals ranging from a low of -.0096 to a high of .2515.<sup>16</sup> Thus, *H5* is not supported when *EFQ* is used as the ethical fading measure. When *EFW* is utilized as the ethical fading measure, the indirect effect (lower-level confidence interval = -.0122, upper-level confidence interval = .2485) is still not significant as can be seen in *Table 6 (Panel A)*.

*H6* postulates that episodic envy mediates the relationship between pay disparity and unethical conduct. That is, the individual receiving less pay is expected to experience a more intense feeling of episodic envy and thus more likely to engage in fraud holding perceived unfairness and ethical fading constant. *Table 5 (Panel B)* indicates that, when *EFQ* is used as the ethical fading measure, the indirect effect of pay disparity (*Group*) on unethical behavior (*FCL5*) through episodic envy (*EE*) is not significantly different from zero (lower-level confidence interval = -.1555, upper-level confidence interval = .2222). *H6* is therefore not supported. When *EFW* is designated as the ethical fading measure, as shown in *Table 6 (Panel B)*, the indirect effect is still not significantly different from zero (lower-level confidence interval = -.0619, upper-level confidence interval = .0974).

*H7* states that ethical fading mediates the relationship between pay disparity and unethical action. Specifically, when holding perceived unfairness and episodic envy constant, one who is paid less is predicted to experience a higher degree of ethical fading, which, in turn, makes him or her more likely to commit fraud. The results in *Table 5 (Panel C)* show that the indirect effect of pay disparity (*Group*) on unethical behavior (*FCL5*) through ethical fading

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<sup>16</sup> Since the bootstrapped confidence intervals straddle zero, the indirect effects are not statistically significant (Hayes, 2013). The bootstrap analysis is bias-corrected and based on 10,000 samples. In addition, the intervals and are set to a confidence level of 90 percent.

(*EPQ*) is not statistically significant with the bootstrapped confidence intervals ranging from a low of -.0126 to a high of .2921. Thus, *H6* is not supported when *EFQ* is specified as the ethical fading measure. The indirect effect is still not statistically significant from zero (lower-level confidence interval = -.0567, upper-level confidence interval = .0182) when *EFW* is designated as the ethical fading measure, as can be seen in *Table 6 (Panel C)*.

## Second Analysis

### Participants

A secondary analysis was conducted wherein those participants who identified themselves as accounting majors were removed. Martinov-Bennie & Mladenovic (2015) state that educators and professionals believe that ethical decision-making should be an essential component of an accounting student's education, especially given the corporate scandals of the early 2000s (e.g., Enron), and thus support the inclusion of ethics-related materials into accounting curricula. They also discuss research that supports the idea that accounting students' ethical judgments can be positively affected by interventions such as exposure to the AICPA's code of ethics (e.g., Green & Weber, 1997) and the completion of a stand-alone ethics course (e.g., Cloninger & Selvarajan, 2010). As such, one could argue that the emphasis on ethics in their curricula results in accounting students being more ethically sensitive, and thus more likely to behave ethically, than other business students whose respective curriculum does not have this emphasis.

Research by Clikeman and Henning (2000) and Sweeney and Costello (2009) support the argument that accounting majors are more pre-disposed to act ethically than other business majors. Clikeman and Henning (2000) show that senior accounting students were more strongly opposed to questionable acts of earnings management than senior students from other business majors. More recently, Sweeney and Costello (2009) found that the ethical intentions and judgments of accounting students were significantly higher than those of non-accounting students across various scenarios. Clikeman and Henning's (2000) argument for the "socialization" aspect of accounting education may explain these results. That is, accounting students are socialized to give "priority to financial statement users' needs, while students majoring in other business disciplines come to identify more closely with the goals of corporate managers" (Clikeman and Henning, 2000, p. 1). This argument is similar to Shaub's (1994) claim that accounting curricula stresses a rule-based approach that is rooted in ethics. Thus, in light of the empirical evidence that supports the notion that accounting students are more inclined to act behave ethically than non-accounting students, the 21 participants (28 percent) who identified themselves as accounting majors were culled from the analysis.

The participants in this analysis, on average, spent 20 minutes completing the experiment and were paid a total of \$6.21, which included a flat fee of \$3 that was independent of their performance. The demographic data in *Table 7* show that the sample consisted of 36 males (66.7 percent) and 18 females (33.3 percent). Several business majors were represented, with most of the participants identifying as either marketing or finance students (27.8 percent and 16.7 percent, respectively). Finally, 39 students (72.2 percent) reported their GPA as being at 3.0 or above.

## Hypothesis testing

*H1* predicts that a person who is paid less will see this disparity in pay as more unfair than one who is paid more. To test this hypothesis, an ANCOVA was conducted using *Group* as the predictor/independent variable (Coded as 0 = HPG, 1 = LPG), *Perceived Unfairness* as the outcome/dependent variable, and *Gender* as the lone covariate (Gender, coded as 0 = female, 1 = male). Since higher scores on the *Perceived Unfairness* questions indicate that the participant viewed the situation (i.e., the pay disparity) as more unfair, the LPG was expected to have a higher mean on this measure than the HPG. The results listed in *Table 8(Panel A)* reveal that the LPG's mean score for the *Perceived Unfairness* measure (*Mean* = 2.81, *SD* = 0.63) was higher than that of the HPG (*Mean* = 2.38, *SD* = 0.80). The results in *Table 8 (Panel B)* also show that this difference was significant ( $p < .05$ ). Thus, *H1* is supported.

Similar to the first analysis, the remaining six hypotheses were tested utilizing the PROCESS add-in to SPSS wherein *Group* (Coded as 0 = HPG, 1 = LPG) was the designated predictor/independent variable, *FCL5* (number of frauds committed in rounds 14 through 18) the outcome/dependent variable, *PU* (perceived unfairness) the first mediating variable, *EE* (episodic envy) the second mediating variable, *EFQ* (ethical fading questions) the third mediating variable, and *Gender* (gender, coded as 0 = female, 1 = male) the single covariate. *H2* posits that perceptions of unfairness regarding pay are positively related to feelings of envy. As with the interpretation of the *PU* measure, higher scores on the *EE* measure indicate a greater degree of episodic envy. As such, a positive coefficient was anticipated. The results in *Table 9 (Panel A)* indicate that when *EE* is designated as the outcome variable, its relationship with *PU* is positive (coeff. = 0.34) and significant ( $p < .05$ ). Therefore, *H2* is supported.

*H3* postulates that feelings of envy because of pay disparity are positively related to the likelihood of ethical fading. A positive coefficient is expected since higher mean scores on the *EFQ* questions suggest a greater degree of ethical fading. The results in *Table 9 (Panel B)* show that the relationship between *EE* and *EFQ* is positive (coeff. = 0.34), but not significant ( $p = .30$ ), when *EFQ* is designated as the outcome variable. Thus, *H3* is not supported.

As with the first analysis, an alternate measure of ethical fading, *EFW*, was substituted for *EFQ*. Since the use of more ethics-related words indicates less ethical fading, *EFW*'s relationship with *EE* is expected to produce a negative coefficient. The results listed on *Table 10 (Panel A)* do reflect a negative (coeff. = -0.64), but not significant ( $p = .55$ ), relationship. Thus, *H3* is still not supported when *EFW* is employed as an alternative ethical fading measure.

*H4* states that there is a positive relationship between ethical fading and unethical behavior. In other words, one who experiences a higher degree of ethical fading is predicted to be more likely to engage in fraud. As *FCL5* captures the number of frauds the participant committed in rounds 14 through 18, its relationship with *EFQ* is expected to produce a positive coefficient. The results from *Table 9 (Panel C)* reflect that the relationship between *EFQ* and *FCL5* is positive (coeff. = 0.56) and significant ( $p < .05$ ) when *FCL5* is specified as the outcome variable. Thus, *H4* is supported when *EFQ* is used as the ethical fading measure. However, when *EFW* is substituted for *EFQ* as presented in *Table 10 (Panel B)*, the relationship between fraud and ethical fading is not significant ( $p = .92$ ). Again, it is worth noting that *Gend* has a significant relationship with *FLC5* ( $p < .01$ ), with the positive coefficient (coeff. = 1.00) suggesting that men were more likely to misrepresent than women.

*H5* predicts that perceived unfairness mediates the relationship between pay disparity and unethical behavior. The results reported in *Table 11 (Panel A)* show that the indirect effect of pay disparity (*Group*) on unethical behavior (*FCL5*) through perceived unfairness (*PU*) is statistically significant with the bootstrapped confidence intervals ranging from a low of .0280 to a high of .8793.<sup>17</sup> Thus, *H5* is supported when *EFQ* is used as the ethical fading measure. When *EFW* is utilized as the ethical fading measure, however, the indirect effect (lower-level confidence interval = -.0201, upper-level confidence interval = .5535) is not significant as can be seen in *Table 12 (Panel A)*.

*H6* postulates that episodic envy mediates the relationship between pay disparity and unethical conduct. That is, the individual receiving less pay is expected to experience a more intense feeling of episodic envy and thus more likely to engage in fraud holding perceived unfairness and ethical fading constant. *Table 11 (Panel B)* indicates that, when *EFQ* is used as the ethical fading measure, the indirect effect of pay disparity (*Group*) on unethical behavior (*FCL5*) through episodic envy (*EE*) is not significantly different from zero (lower-level confidence interval = -.3328, upper-level confidence interval = .0414). *H6* is therefore not supported. When *EFW* is designated as the ethical fading measure, as shown in *Table 12 (Panel B)*, the indirect effect is still not significantly different from zero (lower-level confidence interval = -.2814, upper-level confidence interval = .0694).

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<sup>17</sup> Since the bootstrapped confidence intervals do not straddle zero, the indirect effects are statistically significant (Hayes, 2013). The bootstrap analysis is bias-corrected and based on 10,000 samples. In addition, the intervals and are set to a confidence level of 90 percent.

*H7* states that ethical fading mediates the relationship between pay disparity and unethical action. Specifically, when holding perceived unfairness and episodic envy constant, one who is paid less is predicted to experience a higher degree of ethical fading, which, in turn, makes him or her more likely to commit fraud. The results in *Table 11 (Panel C)* show that the indirect effect of pay disparity (*Group*) on unethical behavior (*FCL5*) through ethical fading (*EPQ*) is statistically significant with the bootstrapped confidence intervals ranging from a low of .0127 to a high of .6696. Thus, *H6* is supported when *EFQ* is specified as the ethical fading measure. However, the indirect effect is not statistically significant from zero (lower-level confidence interval = -.1840, upper-level confidence interval = .2182) when *EFW* is designated as the ethical fading measure, as can be seen in *Table 12 (Panel C)*.

### Supplemental Analysis

The lack of support for *H3* and *H6* could mean that key mediating and/or moderating variables were excluded from the model that, when included, might lead to significant indirect effects and would thus warrant episodic envy's inclusion as an essential construct that mediates the relationship between pay disparity and fraud. Some of these potential mediating and/or moderating variables could be individual attributes that research has suggested as important to the decision-making process such as one's creativity (e.g., Bierly, Kolodinsky, & Charette, 2009), emotional intelligence (e.g., Deshpande, 2009), and religiosity (e.g., Tang & Chiu, 2003). Another individual characteristic of potential significance could be one's preference for risk.

Most of the research in the ethical decision-making literature has focused on the individual's *perceptions* of risks associated with alternative actions or situations (e.g., Cherry &

Fraedrich, 2002). As such, there is paucity of research that directly examines the influence of an individuals' *preference* for risk on his or her ethical decision-making in a business context, especially his or her behavior related to misreporting. However, the impact of risk preference on decision-making, in general, has been studied extensively in the psychology and management literatures (e.g., Hung & Tangpong, 2012) and it should be expected to affect one's ethical decisions in a business scenario. In particular, logic would dictate that one who is risk averse is less likely to experience ethical fading, and thus less likely to engage in fraud, than a person who is more risk seeking. Thus, risk preference could be a key variable that moderates that relationship between episodic envy and ethical fading.

To test the possible moderating effect of risk preference on the relationship between episodic envy and ethical fading, a PROCESS analysis was conducted using the sample of 54 participants from the second analysis that specified episodic envy (*EE*) as the predictor, risk preference (*RP*) as the mediator, *EFQ* (ethical fading questions) as the outcome, and *Gender* (*Gend*) as the single covariate. The risk preference measure comes from a question in the Zodiac and Personality that asks the participant's general attitude towards risk. That question, "I enjoy taking risks," is rated on the degree to which an individual agrees or disagrees with this statement, with the scale ranging from 1 (strongly disagree) to 5 (strongly agree). Thus, higher scores indicate the person is more risk seeking whereas lower scores suggest an aversion to risk.

The results from the PROCESS analysis listed in *Table 13* reflect that the effect of the interaction between risk preference (*RP*) and episodic envy (*EE*) on ethical fading (*EFQ*) is marginally significant ( $p = .06$ ). As such, these results suggest that one's preference for risk has a moderating effect on the relationship between episodic envy and ethical fading. More



specifically, *Figure 5* shows that when episodic envy is high, those who are more risk neutral and risk seeking are more likely to experience ethical fading. When episodic envy is low, however, these differences among risk preferences are more muted. Thus, whether one ethically fades in response to episodic envy seems to be dependent on the individual's risk preference.

### Discussion

Results from the first analysis indicate that perceptions of unfairness are positively related to feelings of envy. None of the other hypothesized relationships were supported, however. A second analysis was conducted wherein those participants who identified themselves as accounting students were extracted from the sample. Consistent with prior literature, the substantial change in the results between the two analyses suggests that the “socialization” aspect of their education makes accounting majors “different” from other business majors with respect to their ethical sensitivity and/or ethical decision-making (e.g., Clikeman & Henning, 2000; Sweeney & Costello, 2009). As such, removing accounting students from the sample pool was appropriate.

The findings from the second analysis imply that an individual paid at a lower rate is more likely to perceive his or her situation as unfair, which leads to a greater feeling of envy. Although this feeling of envy had no significant effect on ethical fading, a supplemental analysis using the sample without the accounting students indicates that a person's preference for risk may moderate this relationship. That is when envy is high, those who are more risk neutral and risk seeking, as opposed to risk averse, are more likely to experience ethical fading. Furthermore, the findings from the second analysis suggests that those who experience a higher degree of

ethical fading are more likely to engage in fraud, and that ethical fading, along with perceived unfairness, appear to be significant processes that explain how disparities in pay may lead to fraud.

There are three items to consider when interpreting the results. First, ethical fading was only significant as a predictor of fraud and as a mediator between pay disparity and fraud when it was measured utilizing questions about the participant's framing of the decision (*EPQ*) rather than his or her responses to a word completion exercise (*EFW*). Since ethical fading is a relatively new construct, more research is needed regarding how to best measure it. The second consideration should be that, in the supplemental analysis, the moderating effect of risk preference on the relationship between episodic envy and ethical fading was tested independently from the overall model. When included in the model, the significance of one's risk preference as a moderator may be reduced. Further theorization should be considered to understand the potential relationships among envy, individual characteristics such as risk preference, and ethical fading. The third, and final, consideration when interpreting these findings is the substantial change in the results when those participants who identified themselves as accounting students were removed from the sample. More research is needed to explore whether the inclusion of ethics related material in their curricula makes accounting students more "immune" to ethical fading.

### Conclusion

Financial statement fraud has received considerable attention among researchers, regulators, audit firms, and organizations since the corporate scandals of the late 1990s and early

2000s. Despite extensive organizational and legislative efforts aimed at its deterrence, however, financial misrepresentation appears to be on the rise (PricewaterhouseCoopers, 2011). The simplistic explanations offered as to one's motivation for engaging in fraud and the nature of unethical acts itself may explain the failure to curtail incidents of misreporting thus far. That is, fraud is believed to be an intentional act by a manager who has sacrificed his or her ethics for personal gain. Contrary to this conceptualization, the demographic and anecdotal evidence supports the idea that most fraudsters are the "accidental" type who did not intend to act unethically yet somehow became entangled in a vicious cycle of concealing their actions (e.g., ACFE, 2012). As such, understanding financial statement fraud may require a more nuanced investigation into the psychological processes underlying a manager's decision-making.

Murphy and Dacin (2011) argue that environmental factors such as the pressure to meet earnings expectations of analysts may induce managers to commit fraud without knowing they are behaving unethically. This lack of awareness is perhaps the result of ethical fading, a mechanism where one's inherent psychological constraints, such as biases or heuristics, fade any moral considerations from the decision-making process. Thus, research with the objective of identifying the psychological processes that lead to ethical fading, as well as the contextual factors that trigger those operations, can contribute towards implementing measures that are more effective at deterring and preventing accounting fraud. The purpose of this chapter is to investigate how a particular contextual factor, pay disparity among managers, influences egocentric perceptions of unfairness and envy to affect the likelihood of one engaging in ethical fading and fraudulent behavior.

Based on the Theory of Unintended Amoral Behavior (Chapter 2) it is predicted that a manager who compares his or her pay to one that is paid more will perceive this disparity as more unfair than a manager who compares his or her earnings to a lower-paid referent. Furthermore, it is hypothesized that this perception will produce feelings of envy, which in turn increases the likelihood of ethical fading, and thus fraudulent behavior, in the manager who is paid less. A 1 x 2, between-participants design, with pay rate as the manipulation, was utilized to test these predictions. The experiment required the participant to sell assets of given values to a computerized buyer whereupon he or she had the opportunity to misrepresent the quality of those assets prior to each transaction. The participants' perceptions of unfairness, episodic envy, ethical fading, and rate of misrepresentation were measured during this experiment.

The results suggest that a person paid at a lower rate is more likely to view this disparity as unfair, which leads to a greater feeling of envy. Although envy had no significant direct effect on ethical fading in the primary analyses, a supplemental analysis indicates that one's preference for risk may moderate this relationship. Furthermore, the primary findings of this chapter indicate that those who experience a higher degree of ethical fading are more likely to engage in fraud, and that ethical fading, along with perceived unfairness, seem to be significant processes that explain how disparities in pay may lead to fraud. Ethical fading, however, was only significant as a predictor of fraud and as a mediator between pay disparity and fraud when one type of measure was used.

As with any research, this chapter is not without its limitations. The first limitation of this chapter is that the above outlined results only held when accounting students were removed from the sample. The substantial change in the results between the two analyses suggests that the

“socialization” aspect of their education makes accounting majors “different” from other business majors with respect to their ethical sensitivity and/or ethical decision-making, which is consistent with other studies (e.g., Clikeman & Henning, 2000; Sweeney & Costello, 2009). Further inquiry is needed to determine whether the inclusion of ethics related material in their curricula makes accounting students more “immune” to ethical fading.

The second limitation is that the sample is comprised exclusively of upper-level business students. The generalizability of the results generated from student samples has been controversial in that the studies examining the ethical decision-making of students compared to those of professionals has been mixed. One could argue that the education, experience, and socialization of professionals provide them with the cognitive tools and the motivation to behave more ethically than students. Conversely, Bazerman and Tenbrunsel (2011) argue that the psychological processes that inhibit ethical behavior are “ordinary” since they “affect even very honest and smart people, including managers, executives, and other professionals” (p. 45). Nevertheless, business students as a suitable proxy for experienced workers is an unresolved question that requires further empirical research.

The third limitation of this chapter is that the ethical fading was only significant as a predictor of fraud and as a mediator between pay disparity and fraud when it was measured using questions about how the participant framed his or her decisions rather than his or her responses to a word completion exercise that has been used successfully in psychology studies. Two explanations that address the difference in the results produced by the two measures can be offered. The first reason is that business student may have not yet developed the language skills that are demanded by a word completion exercise. The second, and perhaps more legitimate

reason for the difference, is that the word completion exercise was completed after the 25<sup>th</sup> round of selling assets as opposed to the alternate ethical fading measure which was closer in time to the questions regarding the participant's perceptions of unfairness and feelings of envy. As with any new construct, how to best measure ethical fading is still unresolved and requires further research.

The final limitation is that the moderating effect of risk preference on the relationship between episodic envy and ethical fading was analyzed apart from the overall model given the constraints of the data. When included in the model, the significance of one's risk preference as a moderator may become muted. As such, additional theoretical consideration that includes risk preference is required to assess its suitability for incorporation into the TUAB (Chapter 2). Furthermore, future tests of the model may also try to incorporate other individual attributes that possibly have mediating or moderating effects.

There are two key contributions of this chapter. First, this research identifies some of the psychological processes suggested by bounded ethicality that limit one's ability to make an ethical decision as well as an important contextual factor that provokes those processes. Second, and probably most importantly, this chapter offers evidence that the decision to commit fraud is not necessarily a conscious compromise of one's ethics for some other desired goal (e.g., profit). In addition, this research may also provide specific contributions to the auditing profession, organizations, regulators, and research.

Regarding the auditing profession, an understanding of how certain contextual factors and psychological processes can lead to unethical behavior may result in improved fraud detection. Furthermore, given the subconscious nature of ethical fading, this research suggests

that auditors might re-evaluate the considerable weight they attach to management's character and attitude when conducting fraud risk assessments. With respect to organizations, an understanding of bounded ethicality may allow organizations to design superior fraud controls aimed at mitigating the contextual factors that prompt ethical fading. In addition, an awareness of one's own biases and heuristics may help managers be more psychologically adept in their ethical decision-making. This chapter also suggests that regulators recognize the difference between intentional corruption and unintentional bias, and the factors that drive such bias, if they are to establish effective legislation aimed at deterring fraud. Finally, this chapter contributes to research by both serving as an initial test of the TUAB (Chapter 2) and identifying a key contextual factor that constrains one's ability to act ethically.

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## **CHAPTER 4: CAN THE PRESSURE TO MEET EARNINGS EXPECTATIONS RESULT IN UNINTENTIONAL FINANCIAL FRAUD? (STUDY 3)**

### Introduction

The purpose of this chapter is to examine how a particular contextual factor, the pressure to meet earnings forecasts, may trigger psychology processes such as biases and negative affect that, in turn, influence the likelihood of one unknowingly engaging fraudulent behavior. The lack of awareness that one is behaving unethically is the result of a psychological mechanism of ethical fading wherein the person's psychological constraints fade any moral considerations from the decision-making process (Tenbrunsel & Messick, 2004). Research indicates that environmental factors such as sanctioning systems (Tenbrunsel & Messick, 1999) can significantly influence ethical fading in an individual (Tenbrunsel et al., 2010). In the accounting ethics literature, Murphy and Dacin (2011) contend that the pressure to meet earnings expectations may influence managers to engage in financial statement fraud without their awareness that they are behaving unethically.

Fraud has received considerable attention among regulators, organizations, audit firms, and researchers given its exorbitant costs to society. However, incidents of fraud have increased over the past decade (PricewaterhouseCoopers, 2011) despite legislative efforts, such as the passage of the Sarbanes-Oxley Act of 2002 (SOX), aimed at its deterrence and prevention. A significant factor as to why these efforts have been ineffective in curtailing fraud might stem from a basic, yet inaccurate, assumption regarding the ethical decision-making that underlies such behavior. Greed, or some other basic emotion such as fear, is commonly offered as an explanation as to why managers commit fraud. This explanation is perhaps too simple, however,

since there are many “aggressively acquisitive” individuals who never engage in this behavior (Duffield & Grabosky, 2001). Contrary to the notion of “predator” fraudsters who look to enrich themselves through the exploitation of weak accounting controls, the evidence indicates that “accidental fraudsters” perpetrate a larger number of frauds. As such, fraud may not be the result of an individual making the intentional decision to forsake his or her morals for some other desired goal.

An accidental fraudster is characterized as a decent, law-abiding person who, under typical circumstances, would have never considered committing fraud (Dorminey, Fleming, Kranacher, & Riley, 2012). Data from the Association of Certified Fraud Examiners (2012) suggest most individuals who commit fraud fit such a description in that they are trusted employees with clean employment histories and no prior criminal offenses. The former chief accountant for the SEC’s enforcement division, Charles Niemeier, explained that “[p]eople who never intend to do something wrong end up finding themselves in situations where they are almost forced to continue to commit fraud once they have started doing this. Otherwise, it will be revealed that they had used improper accounting in the earlier periods” (quoted from Bazerman, Loewenstein, & Moore, 2002, p. 100). Thus, understanding financial statement fraud may require a more nuanced investigation into the psychological processes that leads to a manager’s decision.

Wyatt (2004) states that many of the FASB standards contain conceptual impurities that allow for “gaming the system” (p. 52). Supporting this claim, Xu, Taylor, and Dugan’s (2007) review of the earnings management literature suggests that managers “take advantage of the accounting discretion in GAAP to manipulate accruals through accounting choices and

estimates” (p. 195). However, as the line between “clever earnings management” and outright fraud is not necessarily distinct, a manager can be too aggressive in meeting these targets and engage in fraud without the awareness that he or she is acting unethically (Murphy & Dacin, 2011). The effects of bounded ethicality and ethical fading can explain why some managers may unwittingly commit fraud in order to meet earnings expectations.

The Theory of Unintended Amoral Behavior (Chapter 2, hereafter TUAB), which includes the concepts of bounded ethicality and ethical fading, is utilized to predict that a manager who falls below earnings forecasts will manufacture the egocentric perspective that unfair circumstances were the reason the target was not met. Furthermore, it is hypothesized that this egocentric perspective will elicit negative affect, which in turn increases the probability of ethical fading, and thus fraudulent behavior, in the manager who falls below earnings estimates. Finally, a prediction is made that those who are below, yet close, to an earnings target are more likely to commit fraud than managers who either have already reached the goal or are further from it.

Two experiments utilizing an asset-selling task were conducted to test the predictions. Across 25 rounds, participants were required to sell an asset to a computerized buyer whereupon they could earn money on each successful transaction. Before each attempted sale, however, the participants had the opportunity to misrepresent the value of their assets in order to sell them at higher prices. Furthermore, the participants were advised that they could earn a bonus if a certain earnings target was reached. For Experiment 1, the independent variable was whether the participant, who was given one of three earnings goals (i.e., hard, moderate, easy), was above or below his or her respective goal after the penultimate round. Experiment 2 consisted of a 1 x 3

design where the independent, manipulated variable was the participant's "closeness to goal" (i.e., reached, near, or far) before the final round of selling assets. The participants' egocentric perceptions, negative affect, ethical fading, and fraudulent behavior were measured and/or observed across the two experiments.

The primary findings of this chapter, although somewhat mixed, suggest that fraud is more likely to occur as an individual experiences a higher degree of ethical fading. In addition, the results indicate that those people who are closest to meeting an earnings target carry the highest probability of engaging in fraudulent behavior. Finally, the findings did not support the predictions that one's egocentric perceptions of fairness and negative affect contribute towards his or her ethical behavior in a goal achievement setting.

Research with the goal of identifying and examining the contextual factors responsible for ethical fading, as well as the psychological processes that underlie such an operation, can contribute towards implementing more effective fraud deterrence measures. As such, one of the main contributions of this chapter is that it identifies a psychological process suggested by bounded ethicality that limits one's ability to make an ethical decision as well as an important contextual element that triggers those processes. That is, ethical fading may occur in response to the pressure placed on meeting earnings targets. Correspondingly, this chapter provides evidence that the decision to commit fraud is not necessarily a conscious trade-off between ethics and some other desired goal (e.g., profit). This research also provides specific contributions to the auditing profession, managers/organizations, regulators, and research.

In regards to the auditing profession, an understanding of how certain contextual factors and psychological processes interact to influence unethical behavior may result in improved



fraud detection. In addition, given the subconscious nature of ethical fading, this research suggests that auditors reconsider the substantial weight they attach to management's character and attitude when conducting fraud risk assessments. With respect to organizations and managers, knowledge of bounded ethicality may allow organizations to design superior fraud controls aimed at mitigating the contextual factors that influence ethical fading. Furthermore, understanding one's own biases and heuristics may help managers be more psychologically prepared when confronted with the decision to engage in accounting fraud. This chapter also suggests to regulators that recognizing the difference between intentional corruption and unintentional bias, and the factors that influence such bias, is perhaps needed to establish more effective fraud deterrents. Finally, this chapter contributes to research by both serving as a test of TUAB (Chapter 2) and identifying a key contextual factor that limits one's ability to act ethically.

The remainder of this chapter is organized as follows. Section 2 provides an overview of TUAB (Chapter 2) and develops hypotheses from that theory. Section 3 explains the experimental methods employed to test those hypotheses along with the manipulation and measurement of the variables. Section 4 analyzes the statistical results and Section 5 discusses the findings. Finally, Section 6 concludes the chapter and offers a discussion of the chapter's limitations.

### Theory and Hypothesis Development

Individuals typically overestimate the extent to which they will engage in socially acceptable behaviors in the future (Epley & Dunning, 2000), perceive themselves as more ethical

than their peers (Tenbrunsel, 1998), and view a questionable act as less objectionable when it is performed by them as opposed to others (Valdesolo & DeSteno, 2007). In addition, research indicates that people often display “moral hypocrisy” in that they will present themselves as moral individuals while simultaneously behaving in a self-interested manner (Batson, Kobryniewicz, Dinnerstein, Kampf, & Wilson, 1997). The behavioral ethics literature offers a potential explanation, the concept of bounded ethicality, as to how one can violate his or her own moral standards while upholding the self-image that he or she is an ethical person.

Tenbrunsel et al. (2010) define bounded ethicality as the “systematic and predictable psychological processes that lead people to engage in ethically questionable behaviors that are inconsistent with their own preferred ethics” (p. 7). These processes are comprised of innate biases and heuristics that constrain ethical decision-making (Chugh, Bazerman, & Banaji, 2005). In-group favoritism, a tendency to overclaim credit, and implicit forms of prejudice are specific examples of biases that influence bounded ethicality (Banaji, Bazerman, & Chugh, 2003; Bazerman, 2011). As these psychological operations occur at a subconscious level (Gino, Moore, & Bazerman, 2011), the most pernicious aspect of bounded ethicality is it permits one to behave unethically without his or her awareness of doing so. This is accomplished through the mechanism of ethical fading wherein the person’s cognitive biases fade any moral considerations from decision-making (Tenbrunsel & Messick, 2004).

As usual with relatively new fields such as a behavioral ethics, theoretical frameworks are not very well defined (Tenbrunsel & Smith-Crowe, 2008). As such, Chapter 2 constructed a theory, TUAB, which incorporates the concepts of bounded ethicality and ethical fading, by

assembling disparate theories from psychology and behavioral ethics into a coherent whole.

What follows is an overview of that theory.

### Distinction between the System 1 and System 2 Components of TUAB

Kahneman (2011) differentiates between two modes of cognitive processing, which he termed System 1 and System 2 thinking. TUAB (Chapter 2) incorporates this distinction to explain how one may behave unethically under either system of thinking. What follows is a brief discussion regarding both the differences between System 1 and System 2 thinking and how they will be utilized in this chapter to make predictions about unethical behavior in relation to earnings targets.

The primary goal of System 1 is to establish links among corresponding ideas of contexts, actions, and outcomes (Kahneman, 2011). These connections form a working model that allows one to make sense of his or her environment, form a narrative for that person's experiences, and create future expectations. Kahneman (2011) describes System 1 thinking as automatic, intuitive, impulsive, effortless, and emotional. As such, System 1 assesses stimuli "automatically and quickly, with little or no effort and no sense of voluntary control" (Kahneman, 2011, p. 20). One's intuitions of a situation therefore, are essentially the product of the primitive assessments carried out by System 1. These intuitions, however, are subject to systematic errors (i.e., cognitive biases and heuristics) that are embedded within System 1 and provoked under certain conditions (Kahneman, 2011).

The fundamental objective of System 2 is to oversee the intuitions, intentions, impressions, and emotions that are continuously suggested by System 1 (Kahneman, 2011).

System 2 thinking, in contrast to System 1, is characterized as deliberative and capable of reasoning and self-control (Kahneman, 2011). Furthermore, as it possesses the ability to resist the suggestions of System 1, System 2 is considered the final authority in decision-making and one who can utilize this mode of thinking can theoretically increase his or her chances of acting ethically (Bazerman & Tenbrunsel, 2011). System 2 should not be thought of as a perfect model of rationality, however, due to its “laziness” (Kahneman, 2011). That is, System 2 typically functions without exerting the effort required to weigh the ethical implications of a decision (Kahneman, 2011). System 2, instead, often just passively accepts the suggestions of System 1 and, even when it is prompted to put forth more effort, will usually rationalize the emotions generated in System 1 (Kahneman, 2011). In addition, System 2 should not be thought of as a perfect model of rationality even when it is critically evaluating System 1’s intuitions due to its dependence on that system’s biased interpretation of contextual stimuli.

Kahneman’s (2011) dual-process conceptualization is supported across research from psychology (e.g., Alter, Oppenheimer, Epley, & Eyre, 2007) and accounting (e.g., Farrell, Goh, & White, 2014). However, whether the majority of unethical behavior occurs under System 1 or System 2 is an empirical question that is beyond the scope of this chapter. Bazerman and Tenbrunsel (2011), however, contend that managers often rely on System 1 given the demands of their work environment. Thus, this chapter utilizes the System 1 component of TUAB (Chapter 2) to make predictions regarding the relationships among earnings targets, biases, emotions, ethical fading, and fraud. If most unethical behavior actually does occur under System 2, then we would expect to observe the same emotions and biases activated as in System 1. The key

difference is that we would expect to see more cognitive effort in one's decision-making under System 2.

### Overview of the System 1 Component of TUAB

TUAB (Chapter 2) states that quasi-static factors such as one's organizational environment and other situational, or task-specific elements, trigger particular biases and heuristics. Egocentric biases that function to maintain a person's sense of self-worth are particularly vulnerable to such contextual stimuli. The need to preserve one's self-image may lead to a distorted interpretation of stimuli that favor a preferred outcome (Messick & Sentis, 1983) and/or manufactures the perception that the solution which yields the highest benefits to him or her is the most "fair" (Tenbrunsel & Smith-Crowe, 2008). These primitive evaluations occur so rapidly, effortlessly, and automatically that the person's interpretations of contextual information may not feel biased or distorted in any way (Bazerman & Banaji, 2004).

Contextual stimuli are not only interpreted in a biased, egocentric manner, but they can also elicit an emotional reaction (Slovic, 1999). In circumstances where threats to one's ego produce negative affect, the person will be motivated to reduce such emotions quickly without utilizing a deliberate thought process (Kahneman, 2011). As such, if engaging in a questionable behavior alleviates negative affect, then the individual's affect-laden intuition is likely to suggest that such an act is "good" or "appropriate" in that it is the most emotionally satisfying option. Thus, the person is inclined to depend on an "affect heuristic" wherein the negative emotions experienced serves as the basis for his or her judgment. The individual is then likely to substitute a more difficult question (what is the ethical or proper action?) with an easier one (would this

decision make me feel better?). Ethical fading occurs since the moral implications of the alternative decisions are not given any consideration, thus increasing the probability that the person behaves unethically. TUAB (Chapter 2) is represented by *Figure 3*. The remainder of this section elaborates upon this model and utilizes it to make predictions regarding the effects of not meeting earnings targets on a manager's likelihood of committing financial statement fraud.

### Contextual Stimuli and Biases/Heuristics

Environmental factors can and do influence a person's ethical actions (Gino & Pierce, 2009). TUAB (Chapter 2) contends that semi-static factors such as one's organizational climate interacts with other task-specific or situational elements, such as time pressure, to provoke certain biases and heuristics. In turn, the elicitation of these mechanisms results in the person interpreting contextual stimuli not through his or her moral lens, but in a self-interested manner. A person's ethical actions are influenced by the environment in which he or she operates (Gino & Pierce, 2009)

Research indicates that individuals have difficulty interpreting stimuli in an unbiased manner (Babcock & Loewenstein, 1997; Diekmann, Samuels, Ross, & Bazerman, 1997). One's assessments, and the subsequent weighting, of environmental information are governed by egocentric biases that function to preserve his or her sense of self-worth, such as the need to see him or herself as competent, moral, and deserving (Chugh, Bazerman, & Banaji, 2005). The need to maintain a high self-worth can distort the processing of stimuli in a way that supports a person's preference for a particular outcome (Messick & Sentis, 1983) and/or manufactures the idea that the option yielding the highest benefits is the most "fair" (Tenbrunsel & Smith-Crowe,

2008). Since one evaluates information automatically and effortlessly (Epley & Caruso, 2004), that is, assesses the contextual stimuli on the basis of how those factors affect the person's self-worth, his or her perceptions may not feel biased or distorted in any way (Bazerman & Banaji, 2004).

### Application of TUAB (Chapter 2) to Earnings Expectations

Bargh and Chartrand (1999) state that the majority of one's responses, that is, his or her judgments, behaviors, and decisions, to the environment are directed by how the person relates the available information to whatever goal he or she is currently pursuing. However, the motivation that drives goal or task-directed behavior may also elicit egocentric perspective taking (Wicklund & Steins, 1996), especially when an individual is making judgments related to the outcomes derived from such behavior. Beauregard and Dunning (2000) found that participants who "failed" an experimental task, an ego-threatening event, were more likely to judge a target's intelligence based on how that target's performance compared with their own than those individuals who did not fail the task. Furthermore, Libby and Rennekamp's (2012) results demonstrate that when an individual performs well, a positive outcome, he or she is likely to engage in self-attribution wherein he or she gives greater weight to internal factors rather than external ones as explanations for his or her performance. Evaluations regarding the fairness of goal outcomes (i.e., goal attainment or goal failure), along with the processes that lead to those outcomes, are also subject to egocentric interpretations. Supporting this claim, Blanthorne and Kaplan (2008) note that research across psychology (Epley & Caruso, 2004; Messick & Sentis, 1979), organizational behavior (Neale & Bazerman, 1983; Thompson & Loewenstein, 1992),

and accounting (Kachelmeier & Towry, 2002; Kaplan, 2001; Luft & Libby, 1997) indicates that individuals have a tendency to display egocentric perceptions of fairness and ethics.

Biases can be exaggerated under conditions of uncertainty (Bazerman & Tenbrunsel, 2011), which the interpretation of accounting standards can produce. As such, translating the above ideas into the terminology of bounded ethicality, the possible failure of not meeting earnings forecasts serves as a contextual factor that triggers the manager's egocentric biases related to self-worth. One's sense of both competency and deservingness as a manager may feel threatened if his or her company is unlikely to achieve these targets. However, if a manager is able to meet earnings expectations by pushing beyond the acceptable boundaries of GAAP, then he or she is likely to prefer such an option because of the desire to maintain his or her sense of self-worth. Accordingly, the manager will subconsciously search and place more emphasis on the evidence which supports the decision to violate GAAP while evaluating more critically, or completely discounting, the evidence which does not support that option. Moreover, as a means to further protect his or her self-worth, the manager will manufacture an egocentric perspective that he or she was placed at a disadvantage and the "fair" solution is the one that will yield the deserved benefits associated with meeting earnings targets. Thus, the first hypothesis is stated as:

*H1: A manager who falls below earnings expectations will display a higher degree of egocentrism regarding his or her perceptions of fairness than a manager that has already met earnings expectations.*

#### Biases/Heuristics and Affect-laden Intuition

Along with distorting a person's perceptions and interpretations of stimuli, TUAB (Chapter 2) predicts that provoking egocentric biases related to self-worth will elicit negative



affect. When experiencing such emotions, the individual is motivated to diminish those feelings without engaging in a deliberate thought process (Kahneman, 2011). Thus, since visceral impulses typically dominate at the time one is making a decision (Loewenstein, 1996), the person may rely on his or her “affect-laden intuition” (i.e., gut feeling) to determine whether potentially unethical actions are suitable responses to a dilemma (Murphy & Dacin, 2011). Consequently, he or she will utilize an “affect heuristic,” a mental shortcut whereupon the person’s intuition, formed by the quick and automatic emotions that precede cognition, serves as the basis to guide his or her behaviors and/or decisions (Bazerman & Chugh, 2006; Finucane, Alkhami, Slovic, & Johnson, 2000).

#### Application of TUAB (Chapter 2) to Earnings Expectations

Prospect Theory (Kahneman & Tversky, 1979; 1984) posits that outcomes that exceed a reference point are considered psychological gains and those below are losses. Experiencing a loss from falling below a reference point, or target, evokes strong, negative emotions (Kahneman, 2011). This is consistent with the Unfolding Emotion Episode Theory (Stein, Trabasso, & Liwag, 1993) which states that a change in the status of a valued goal will trigger emotional reactions (Cron, Slocum, VandeWalle, & Fu, 2005). Specifically, one who has expended some amount of effort to achieve a goal of personal importance will experience positive emotions when that goal is achieved. Conversely, not achieving that goal will elicit negative emotions. Aarts, Custers, and Holland (2007) point to literature (Carver & Scheier, 1998; Higgins, 1998; Martin & Tesser, 1996) which suggests that failure events, such as goal disconfirmation, can trigger a variety of distinct, individual-dependent emotional reactions. As

discussed in Cron et al., (2005), these emotions can range from anger and sadness (Williams, Donovan, & Dodge, 2000) to general discomfort (Ilgen & Davis, 2000). In addition to the emotional response when one fails to achieve a target, Cohen-Charash and Spector (2001) argue that the person's emotions are influenced by whether he or she views a particular outcome as fair. Research from the procedural justice literature supports this claim (e.g., Krehbiel & Cropanzano, 2000; Weiss, Suckow, & Cropanzano, 1999).

In terms of bounded ethicality, earnings forecasts serve as a natural reference point for management (Murphy & Dacin, 2011) and not meeting them, along with the forfeiture of benefits (e.g., stock options) that are normally associated with reaching such goals, registers as a psychological loss for a manager. That is, not achieving the critical goal of meeting earnings targets, the contextual stimuli, suggests to the manager that he or she is not suited for a management position, thus producing negative affect. Additionally, the manager's egocentrically manufactured perspective of having been placed in an unfair situation will elicit a negative emotional response. Thus, the second hypothesis is stated as:

*H2: Egocentric perceptions of fairness resulting from not meeting earnings expectations are positively related to the intensity of negative affect.*

#### Affect-laden Intuition, Ethical Fading, and Unethical Behavior

As discussed above, one involved in a dilemma will be motivated to reduce negative emotions promptly without engaging in a more effortful thought process (Kahneman, 2011). Thus, visceral responses tend to dominate during decision-making (Loewenstein, 1996). The individual will correspondingly rely on his or her affect-laden

moral intuition to determine whether a potentially unethical action is acceptable and employs an affect heuristic to guide decision-making.

Haidt (2001) argues that quick intuition often comes before moral judgment. This may be due to one's reliance on an affect heuristic. Kahneman (2011) states that this heuristic is an instance of substitution whereupon a more cognitively taxing question (what is the ethical or proper action?) is replaced with a less demanding one (would this decision make me feel better?). Therefore, how the person feels towards the alternative decisions will determine whether he or she engages in ethical fading (Chapter 2).

Individuals are overconfident and thus biased toward their intuitions formed from automatic processes such as the affect heuristic (Kahneman, 2011). As such, TUAB (Chapter 2) posits that a well-reasoned, conscious decision to forsake one's ethics is not what necessarily drives behavior. Rather, a person's actions in an ethical dilemma seem more like an "emotional reflex" that is controlled by automatic and biased cognitive mechanisms. Thus, if a potentially unethical behavior may diminish the negative affect experienced in a particular dilemma, then the individual's affect-laden intuition is expected to suggest that such an act is "good" or, at minimum, "suitable," since it is the most emotionally attractive. The desire to satisfy visceral impulses may result in ethical fading, an instance where the "moral colors of an ethical decision fade into bleached hues that are void of moral implications" (Tenbrunsel & Messick, 2004, p. 224). Finally, TUAB (Chapter 2) claims that the probability of one subconsciously engaging in unethical behavior increases under instances of ethical fading.

## Application of TUAB (Chapter 2) to Earnings Expectations

Barsky (2008) and Moore (2008) argue that moral disengagement, a concept related to ethical fading, may be a significant factor in organizational corruption.<sup>18</sup> Barsky's (2008) theoretical model posits that certain attributes of goals and goal-setting practices can lead to unethical behavior through moral disengagement. Research also indicates that negative emotions are a significant moderator in the relationships among stimuli such as goal orientation, moral disengagement, and unethical behavior. In their examination regarding the role of negative emotion in moderating goal-priming effects, Aarts et al. (2007), identify research that suggests affective processes can influence one's motivated actions without reaching his or her conscious awareness (Damasio, 1994; Dijksterhuis & Aarts, 2003; Fazio, 2001; LeDoux, 1996; Zajonc, 1980). Furthermore, Samnani, Salamon, and Singh's (2013) results suggest that moral disengagement moderates the relationship between negative emotions and counterproductive work behaviors. Finally, a multilevel study of student teams indicates that negative affect (i.e.,

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<sup>18</sup> The distinction between moral disengagement and ethical fading has yet to be established to the best of my knowledge. Moore, Detert, Treviño, Baker, & Mayer (2011), however, argue that Bandura (2002) conceptualizes moral disengagement as an individual trait wherein the inclination to use processes of disengagement vary across people. One can infer from this conceptualization that morally disengaging in an ethical dilemma is a conscious, deliberate strategy utilized by the decision maker. In contrast, ethical fading is the effect of a subconscious process determined by biases inherent in everyone. Thus, there is not "conscious" decision to fade the implications from one's decision.

envy) has an indirect effect on social undermining through moral disengagement (Duffy, Scott, Shaw, Tepper & Aquino, 2012).

Applying TUAB (Chapter 2), a manager is likely to depend on his or her affect-laden intuition and thus utilize an affect heuristic wherein the negative emotions produced by not meeting earnings forecasts serve as the basis to guide his or her decision. Consequently, the manager automatically substitutes a difficult question (what is ethical or in accordance with GAAP?) with an easier one (how does choosing this particular option make me feel?). At this point, ethical fading has transpired. As such, the third hypothesis is stated as:

*H3: Negative affect resulting from not meeting an earnings target is positively related to the likelihood of ethical fading.*

Gino and Pierce (2009) argue that a person's ethical actions are influenced by his or her environment. Quasi-static factors such as incentive systems (Flannery & May, 2000; Hegarty & Sims, 1978; Schweitzer & Croson, 1999; Tenbrunsel, 1998; Treviño & Youngblood, 1990), norms and culture (Treviño, Butterfield, & McCabe, 1998), and codes of conduct (Cressey & Moore, 1983; Treviño & Youngblood, 1990; Weaver, Treviño, & Cochran, 1999) have been identified as organizational elements that affect ethical behavior within organizations (Gino & Pierce, 2009, Schweitzer, Ordóñez, & Douma, 2004). In addition, Kern and Chugh's (2009) results indicate that situational, or task-specific, features such as time pressure may impel unethical conduct. Recently, the pernicious effects of organizational goal setting, in particular, have gained some attention in the management literature (Ordóñez, Schweitzer, Galinsky, and Bazerman, 2009).

Jensen (2003) claims that cheating and lying are natural consequences that arise when rewards are linked to the achievement of goals. Correspondingly, Barsky's (2008) theoretical model postulates that goal setting can hinder ethical decision-making. The results of Schweitzer et al. (2004) support the contentions of Jensen (1993) and Barsky (2008). They found that individuals with unmet goals were more likely to engage in unethical behavior than those who were only advised to do their best. These results held even when there was no economic incentive attached to goal achievement. Furthermore, the findings of Schweitzer et al. (2004) suggest that the proximity to a goal is an important determinant of one's behavior. They theorized that a person who is close to, as opposed to further away from, achieving a goal will incur higher psychological costs (in terms of negative emotions) if he or she fails to reach that goal and, as a result, is more inclined to behave unethically. Supporting this notion, Schweitzer et al. (2004) discovered that individuals who were closer to reaching a goal were more likely to overstate their performance than those who were more distant. The use of organizational goal setting has also been associated with falsifying financial reports (DeGeorge, Patel, & Zeckhauser, 1999; Schweitzer et al., 2004).

Kaplan, McElroy, Ravenscroft, and Shrader (2007) argue that the intense focus to meet earnings targets can lead to dysfunctional conduct, including the manipulation of recorded earnings (Hope, Thomas, & Vyas, 2013). As such, Meyers, Meyers, and Skinner (2006) state that a manager who is unwilling to report a decline in earnings per share (EPS) is compelled to engage in aggressive accounting choices, which, in the most severe cases, results in financial statement fraud. Myers et al. (2006) point to the *ex post*

evidence on fraud provided by studies of both SEC enforcement actions and earnings restatements as support for their claim. In addition, Bell and Carcello's (2000) comparison of fraud to non-fraud companies indicates that management's overemphasis on meeting earnings estimates increases the probability of fraudulent financial reporting. Soltani (2013), utilizing a qualitative, comparative analysis of three American (Enron, WorldCom, and HealthSouth) and three European organizations culpable of fraud (Parmalat, Royal Ahold, and Vivendi Universal), discovered that the management of these companies made increasingly aggressive estimates and made aggressive accounting choices to match those unrealistic analyst targets they helped promote. Finally, Boylan's (2012) experimental results show that individuals with higher earnings targets produce larger errors in estimates of profitability and asset values, even despite financial incentives to produce the most accurate estimate possible and the absence of such incentives to manipulate those numbers. Boylan (2012) concludes "earnings targets affected managers' judgment about amounts to be reported in the financial statements, and led to *sub-conscious* biases that produced results causing managers' estimates to be erroneously correlated with external earnings targets" (p. 209, emphasis in original). This inference is consistent with Barsky's (2008) model that theorizes moral disengagement as a moderating factor between goal setting and unethical behavior such as misreporting.

Since ethical fading is a relatively new concept, there is a dearth of studies examining this mechanism. However, empirical research on moral disengagement supports the hypothesized link between ethical fading and unethical behavior. For example, Deter, Treviño, and Sweitzer's (2008) results indicate a positive relationship

between moral disengagement and unethical decision-making. In addition, Moore et al., (2012) utilized both experimental and field settings to explore the effect of moral disengagement on various types of unethical conduct within organizations. Moore et al. (2012) found that one's inclination towards moral disengagement is a strong predictor of unethical behavior, such as the decision to engage in fraud, and more significant than other antecedents of unethical actions that are related to individual differences.

Translating these concepts into the terminology of bounded ethicality, a manager who falls below earnings forecasts will employ an affect heuristic where negative affect serves as the basis to guide his or her decision. As such, the manager will automatically substitute a difficult question (what is the ethical or proper action?) with an easier one (how does choosing this particular option make me feel?). Ethical fading, at this point, has transpired whereupon the manager's affect-laden intuition suggests the act that quells any negative emotion in this particular scenario is the most appropriate, including behavior considered unethical. When confronted with the opportunity to meet earnings targets by engaging in financial statement fraud, a manager is likely to push beyond the acceptable boundaries of GAAP. This is because contravening GAAP would be the most emotionally appealing action since it adjusts for the manager's negative emotions resulting from the perceived unfairness of the situations and the threatened sense of self-worth. Furthermore, managers who are the closest to meeting an earnings goal will incur the highest psychological costs (i.e., negative affect) if they fail to reach that target and will thus be the most likely individuals to engage in fraud. As such, TUAB predicts the following:

*H4: Ethical fading is positively related to the likelihood of engaging in unethical behavior (i.e., fraud).*



*H5: A manager that has not met earnings expectations is more likely to engage in unethical behavior (i.e., financial statement fraud) than one that has already met those expectations.*

*H6: A manager that is close to meeting earnings expectations, but still below that target, is more likely to engage in unethical behavior (i.e., fraud) than one that either is further from the target or has already met the target.*

### Methods

Two experiments were conducted to test the hypotheses. Experiment 1 was designed to test *H1* through *H5* whereas Experiment 2 was devised to test *H6*. Both experiments consisted of modified versions of the procedures employed in Schwartz and Wallin (2002) wherein the participant's task, across all groups, was to sell an "asset" to a computerized buyer. In sum, the participants had to determine both how to disclose the quality of an asset and its price before each attempted sale. Since the participants would earn money from each successful transaction, there existed an incentive for them to misrepresent lower quality assets as higher in that selling assets disclosed as high quality could have resulted in larger payouts. The misrepresentation of an asset's quality served as a proxy for one's willingness to manipulate financial statements. Furthermore, across both studies, the participants were advised that they could earn a bonus if a certain earnings goal was attained. For Experiment 1, the independent variable was whether the participant, who was provided one of three earnings goals (i.e., hard, moderate, easy), was above or below his or her respective goal after the penultimate round. Experiment 2 consisted of a 1 x 3 design where the independent, manipulated variable was the participant's "closeness to goal" (i.e., reached, near, or far) before the final round of selling assets.

## Experiment 1

### Experimental Procedure

What follows is a detailed explanation of the experimental procedure. The participants interfaced with a computer for all aspects of the experiment except when receiving the task instructions and collecting their cash payout from the study administrator. *Figure 6* shows the chronological order of the procedure.

#### Step 1: Role assignment and Instructions Regarding Experiment

The experiment began with informing the participants that they had been assigned the role of sellers with corresponding identification numbers. The study administrator then asked the participants what role they had been given while reviewing two sets of color-coded instructions. The purpose of this action was to intimate that other roles, such as a buyer, were possible.<sup>19</sup> The study administrator then read the instructions aloud to the participants. First, the participants were asked to raise their hand if there were any questions about the instructions. Next, the participants were notified they would be provided with information regarding the names, qualities, and value-ranges of assets to be sold. The instructions then advised the participants that their task, for 25 rounds, is to sell the assets in an online marketplace.

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<sup>19</sup> An open-ended question, across both experiments, was asked regarding the participants' opinions as to where the sellers were located. Of the 90 individuals who participated in Experiment 1, only 2 suggested that the buyers were part of a computer program. For Experiment 2, this belief was shared by five of the 82 participants. These participants' responses were included in the analysis since the difference in the results between including and excluding their data was insignificant.

In regards to selling assets, the instructions stated that the participants must determine both the price of each asset and how to disclose its quality before entering the marketplace. For example, if a participant is given an *Epsilon* asset of average quality with a value between 400 to 500 Credits<sup>20</sup>, then he or she could change its “average quality” designation to “above average” if he or she feels that the original estimate was inaccurate. The value-range of the asset moved in relation with any changes to an asset’s quality. As such, changing an asset of “average quality” to “above average” in the example above would have shifted the value-range from 400 to 500 Credits to 450 to 550 Credits. The participants were then informed that they must determine a price, within the value-range, at which to sell each asset (e.g., 550 Credits). Finally, with respect to the asset-selling task, the participants were advised that the others in this study did not have access to any information regarding their decisions on pricing and disclosing the assets, that any offer could be declined, and that more Credits could be earned by selling assets with higher disclosed values.

Next, the participants were told that an audit, with a variable success rate of detection, may occur following the sale of each asset. For example, the probability of a successful detection for a “poor quality” asset disclosed as “excellent quality” was higher than that same asset disclosed as “average quality.” Furthermore, the participants were informed that a successful audit, that is, where a misrepresentation is detected, would result in a fine of 2000 Credits and that they would lose any Credits gained from the previous transaction. The participants were then advised that they would be awarded a 3,000-Credit bonus if a particular number of earned Credits is reached. Furthermore, the participants were notified that this target, which will be

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<sup>20</sup> A Credit is a fictional currency used in both experiments.

provided to them later in the study, is believed to be reasonable and has been derived so that most individuals are awarded the bonus.

The participants were subsequently informed that, after the 24<sup>th</sup> round, they would be updated on their respective progress towards meeting the earned Credits necessary to receive the bonus and, following this update, will be asked to complete a survey. The instructions then stated that the participants would be prompted to engage in a “word completion” exercise, for which additional Credits could be earned, after the final round. The participants were also notified that any Credits earned from both the asset-selling task (minus any assessed penalties) and the word completion exercise would be converted to US dollars and paid out upon completion of the experiment. The conversion rate of Credits to US dollars was not provided, but the participants were told that the rate is positive.<sup>21</sup> The participants were then advised that they would be prompted to write down their identification numbers, place them in envelopes, and bring those envelopes to the experimenter for payment at the end of the study. Finally, the participants were asked to confirm that they understand the task and click the “Begin Task” link on the computer screen. A list of the instructions is located in *Appendix A*.

## Step 2: Group Assignment and Earnings Target

Upon finishing Step 1, the participants were randomly assigned to either the “easy target” group (ETG), the “moderately difficult target” group (MDTG), or the “difficult target” group (DTG) and provided with the earnings target (8,000, 12,000, or 16,000 Credits for the ETG, MDTG, and DTG, respectively) required to receive the bonus.

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<sup>21</sup> The conversion rate was 1 Credit = 0.0002 US Dollars.

### Step 3: Asset Quality Information

The task of selling assets began as the participants were provided information about the asset. In particular, they were given an asset's name, quality, and value range.<sup>22</sup> For each round, the asset's information was the same for all participants. In addition, there was a disclaimer stating that determining the asset's actual quality and value-range is subjective. Furthermore, there was a header at the top of the screen showing the current round, the total amount of Credits the participant had earned, his or her identification number and his or her respective earnings target. This header was constant throughout the asset-selling task. Another icon showing the date, time, and the number of "buyers" online (a random number between 700 and 799) was also shown at the top of the screen throughout the asset-selling task.

### Step 4: Disclosing and Pricing of Asset

The participants then had to decide how to disclose the value of the asset to the marketplace. Once finished, the participants were prompted to enter the marketplace to sell their asset.

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<sup>22</sup> Each asset is named after a letter in the Greek alphabet (e.g., "*Epsilon*"). The letters *Alpha*, *Beta*, and *Omega* are not used as they may imply a position within a hierarchy or a value in relation to another. There are five quality designations, which are "poor," "below average," "average," "above average," and "excellent."

#### Step 5: Sale of Asset

Once in the marketplace, the participants were advised that Buyer “X”, with the X representing a random letter and three-digit number, either purchased or declined to buy the assets. The buyer was an algorithm with Qualtrics set to where each transaction has an 80 percent probability of success and, accordingly, a 20 percent chance of failure. It is important to note, however, that the participants were not told the buyer was an algorithm. In fact, no information was provided about the buyers throughout the experiment. The intent of not providing buyer information to the participants, along with establishing the possibility of an unsuccessful sale, was to create the impression that the sellers were transacting with other individuals. After each successful transaction, the participants’ balances were updated to reflect the Credits received from any successful transaction.

#### Step 6: Audit of Transaction

An algorithm determined whether an audit was conducted and, if so, its success in having detected a misrepresentation of an asset’s quality. The chance of an audit occurring was 25 percent regardless of whether, or to what degree, the participant misrepresented the asset. If an audit did occur, however, then the degree to which the participant misreported the asset’s quality determined the probability of a successful detection. Specifically, the probability of detection increased by a constant 20 percent for each level of quality reported above that which was given. For example, if an audit occurred in which the participant sold an asset with a “poor quality” designation, then he or she would have faced a 20, 40, 60, or 80 percent probability of detection had the asset been disclosed as below average, average, above average, or excellent, respectively.

Whether or not an audit was conducted and, if so, its results were communicated to the participants. Furthermore, the participants were informed about any penalties levied (2000 Credits) from any audits that successfully detected a misrepresentation of quality. Finally, the round ended after the participants' earnings were updated to reflect any assessed penalty. Steps 3 through 6 were repeated for another 23 rounds.

#### Step 7: Update of Progress towards Earnings Target

After the 24<sup>th</sup> round of selling assets, the participants were updated on their respective progress towards meeting the earnings benchmark required to receive a bonus. The participants were then provided with the information of the asset to be sold in the final round (25<sup>th</sup> round). Finally, the participants were prompted to answer a manipulation check question. This question required the participants to indicate whether they had met the earnings target required for the bonus.

#### Step 8: Zodiac and Personality Survey

The participants were then prompted to complete a variation of the Zodiac and Personality Survey utilized by Gino and Pierce (2009). This survey asked personality and demographic questions as a means of obfuscating the measures related to the participants' egocentric perceptions of fairness, negative affect, and ethical fading. The survey's questions that were not related to these measures were modified versions of those found in the Big Five personality instrument from John and Srivastava (1999). Consistent with Gino and Pierce (2009), the instructions provided basic information about the Zodiac and stated that research shows a

relationship between one's judgments and his or her sign. Finally, the participants were asked to indicate their Zodiac sign and then answer questions related to their personality, preferences, and emotions. The Zodiac and Personality Survey is located in *Appendix B*.

#### Step 9: Resume the Sale of Assets

Steps 3 through 6 were repeated for the 25<sup>th</sup> and final round.

#### Step 10: Word Completion Task

After the 25<sup>th</sup> round of transactions, the participants were instructed to finish a word completion task, which served as another measure of ethical fading. Similar to prior studies (Gino, Schweitzer, Mead & Ariely, 2011; Shu, Mazar, Gino, Ariely, & Bazerman, 2012), the participants were provided with a list of word fragments (a total of eight) of which some (five of the eight fragments) could be completed using words related to ethics. For example, the participants could have finished the fragment "E T \_ \_ \_ \_" with the word "ethical." However, the participants could have also use a neutral word, such as "eternal," to complete the fragment. The participants were advised to fill in the blanks using the first word that came to their mind and that no one answer was correct. In addition, the participants were informed that an additional 250 Credits could be earned for any completed word fragment. Finally, the words were presented individually for which the participants were allowed 45 seconds to complete the fragment. The word completion task is listed in *Appendix C*.



## Step 11: Demographic Data

After finishing the word completion task, the participants completed a questionnaire that captured demographic data such as gender, undergraduate major, GPA, and the number of accounting-related courses taken thus far. The demographic questionnaire is listed in *Appendix D*.

## Step 12: Experiment Ends and the Participant is Paid

Upon finishing the word completion task, the participants were informed that the experiment was over. The participants were then instructed to write down their respective identification numbers, place them into envelopes, and bring those envelopes to the experimenter for payment. Finally, the experimenter translated the earned Credits into US dollars and the participants were paid.

## Independent Variable

Random assignment directed each participant into either the “easy target” group (*ETG*), the “moderately difficult target” group (*MDTG*), or the “difficult target” group (*DTG*). The earnings goal needed to acquire the bonus varied across the three groups, established at 8,000, 12,000, and 16,000 Credits for the *ETG*, *MDTG*, and *DTG*, respectively. These benchmarks were derived so that approximately half of the participants would, based on their “natural” performance, finish below their respective

earnings target whereas the other half would reach their goal.<sup>23</sup> As such, the independent variable was whether the participant was above (*ATG*) or below his or her respective target (*BTG*) after the penultimate round of selling assets (Round 24).

### Measured Variables

There were four measured variables in this experiment: egocentric perceptions of fairness, negative affect, ethical fading, and fraud. These four measures along with control variables are discussed in the following sub-sections.

#### Egocentric Perceptions of Fairness

Egocentric perceptions of fairness regarding meeting or not meeting the earnings benchmark was captured using modified versions of the questions used in Gelfand et al. (2002). Participants were first asked to rate how fair, trustworthy, and honest they had been during the task. Those three questions are as follows:

1. “Overall, I would rate the fairness of my actions in the marketplace as...”
2. “Overall, I would rate the trustworthiness of my actions in the marketplace as...”
3. “Overall, I would rate the honesty of my actions in the marketplace as...”

The participants were then asked to rate how fair, trustworthy, and honest they believe the other participants were during the task. Those three questions:

1. “Overall, I would rate the fairness of others’ actions in the marketplace as...”
2. “Overall, I would rate the trustworthiness of others’ actions in the marketplace as...”

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<sup>23</sup> The different levels of earnings targets were derived from pilot testing.

3. “Overall, I would rate the honesty of others’ actions in the marketplace as...”

The scales ranged from 1 (very unfair/untrustworthy/dishonest) to 5 (very fair/trustworthy/honest). Consistent with Gelfand et al. (2002) and Messick, Bloom, Boldizar, and Samuelson (1985), an overall measure of self-serving bias is derived by subtracting the participant’s average estimation of others’ fairness, trustworthiness, and honesty from their own. Thus, a positive score reflects the degree to which the participant held egocentric perceptions of fairness. The items measuring perceived fairness were embedded within the Zodiac and Personality Survey.

#### Negative Affect

Negative affect was measured using a modified version of the scale utilized in Cron, Slocum, VandeWalle, Fu (2005). The ten items that constitute the measurement are as follows:

1. “Because of my performance, I feel angry now.”
2. “Because of my performance, I feel frustrated now.”
3. “Because of my performance, I feel guilt now.”
4. “Because of my performance, I feel shame now.”
5. “Because of my performance, I feel sad now.”
6. “Because of my performance, I feel disappointed now.”
7. “Because of my performance, I feel depressed now.”
8. “Because of my performance, I feel worried now.”
9. “Because of my performance, I feel uncomfortable now.”
10. “Because of my performance, I feel fearful now.”

The items were rated on the degree to which the participant agrees or disagrees with the situation, with the scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scores across all ten items were averaged. A higher score indicates the participant is experiencing a higher degree of general, negative affect.

Cron et al.'s (2005) measure of negative affect is based on a segment from Bagozzi and Pieters' (1998) instrument of goal-directed emotional reactions. As discussed in Cron et al. (2005), this measure has been used in several goal-setting studies (Brown, Cron, & Slocum, 1997; Huy, 2002; Perugini & Bagozzi, 2001; Perugini & Conner, 2000). This measure is argued to capture appropriate goal-directed emotions (Cron et al, 2005), which focus on "event-based" and "agent-based" reactions (Huy, 2002). Cron et al. (2005) explain that an event-based emotion is a reaction to an event, or outcome, that is evaluated based on the implications regarding the attainment of one's goal. An agent-based emotion is a response to the actions of an agent, which can include the self, in the form of a judgment of praiseworthiness or blameworthiness. The items measuring negative affect were embedded within the Zodiac and Personality Survey.

### Ethical Fading

There were two separate ethical fading measurements. The first is a modified version of the one-item scale employed in Kouchaki, Smith-Crowe, Brief, and Sousa (2013). An additional two measures were added to create a more robust measurement. The questions are as follows:

1. "The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily economic decisions."
2. "The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily financial decisions."
3. "The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily business decisions."

The items are rated on the degree to which the participant agrees or disagrees with the situation, with the scale ranging from 1 (strongly disagree) to 5 (strongly agree). Kouchaki et al.'s (2013) adapted this measure from Tenbrunsel and Messick (1999) to capture the participant's framing of

his or her decision on whether to lie for money in a deception game. Conceptually, if one sees the decisions in this task as primarily financial in nature (i.e., adopts an economics frame), then it follows that ethical considerations have faded from his or her decision-making. Thus, higher scores represent a higher degree of ethical fading. This first measure of ethical fading was embedded within the Zodiac and Personality Survey.

Ethical fading was also measured with the participant's performance on a word completion task. The participant was provided with a list of eight word fragments, five of which may be completed using words related to ethics. The participant was asked to fill in the blanks using the first word that came to his or her mind and that no single answer was correct. In addition, the participant was informed that he or she would be awarded an additional 250 Credits for any completed word fragment. Finally, the words were presented individually for which the participant was provided with only 45 seconds to complete the fragment. The eight words utilized in this experiment were as follows:

1. "M O \_ \_ \_ \_"
2. "V I \_ \_ \_ \_"
3. "E T \_ \_ \_ \_ \_"
4. "H O \_ \_ \_ \_ \_"
5. "T R \_ \_ \_ \_"
6. "R A \_ \_ \_ \_"
7. "C H \_ \_ \_ \_ \_"
8. "B I \_ \_ \_ \_"

Word fragments 1 through 5 represent words that can be completed using either an ethics-related word (e.g., "MORAL," "VIRTUE," "ETHICAL," "HONEST," and "TRUST") or a neutral term (e.g., "MOTEL," "VISION," "ETERNAL," "HORSES," and "TRAIN"). Fragments 6, 7, and 8, however, cannot be completed with an ethics-related word. A higher degree of ethical fading is represented by fewer uses of ethics-related words.

The use of word completion tasks to measure “moral awareness” has been used in several studies (e.g., Gino & Bazerman, 2009; Gino et al., 2011; and Shu et al., 2012). Gino et al. (2011) contend that one fails to recognize the ethical component of a situation when his or her moral awareness is impaired. This failure renders the individual unable to access the ethical decision-making script required to act honestly in scenarios where he or she may cheat to earn money. Thus, ethical constructs are less likely to be salient in a person’s mind when an ethical decision-making script is inaccessible. As discussed in Gino and Bazerman (2009), research suggests that word completion exercises assess implicit cognitive processes (Bassili & Smith, 1986; Tulving, Schacter, & Stark, 1982). As such, a word completion task where the fragments can be completed using terms related to ethics may function as an implicit measure of one’s ability to retrieve ethical concepts.

## Fraud

The participant’s decision to misrepresent the quality of the asset in the final round served as a measurement for his or her willingness to engage in fraudulent behavior. The potential failure of not reaching the goal in this experiment is structured to elicit the same theorized biases and negative affect (i.e., pressures) experienced by one who is below meeting earnings expectations but can meet that target by engaging in financial statement fraud.

## Control Variables

There were two control variables utilized in Experiment 1, the number of times the participant was fined for misrepresentation in the first 24 rounds of selling assets and his or her

gender. The former's inclusion was justified on the belief that a participant's experience with being fined in the previous 24 rounds might make him or her more risk averse and thus less likely to engage in fraud in the final round. With respect to gender, there has been an extensive amount of literature examining its relationship with ethical decision-making, but this research has produced mixed results (Craft, 2013; O'Fallon & Butterfield, 2005; Tenbrunsel & Smith-Crowe, 2008). However, Tenbrunsel and Smith-Crowe (2008) believe that gender is likely to have an impact on ethical behavior and argue that these inconsistent findings are possibly the result of the different experimental settings across the literature. As such, given that men comprise the biggest percentage of those who commit fraud (ACFE, 2010), it is possible that one's gender might have a significant influence on his or her decision to engage in fraudulent behavior in a goal-setting context.

## Experiment 2

The experimental procedure used in Experiment 2 was similar to that of Experiment 1, with one key exception. In Experiment 1, the participants were informed of the Credits they would need to earn in order to receive a bonus immediately following the instructions. In Experiment 2, however, the participants were not notified of the Credits required to earn a bonus until after the 24<sup>th</sup> round of selling assets. Furthermore, in Experiment 2, the participants were randomly assigned to one of the three conditions, the "close-to-goal" group (*CTG*), the "far-from-goal" group (*FFG*) and the "reached goal" group (*RG*).<sup>24</sup> The participants in the *RG* were

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<sup>24</sup> Unlike the first experiment, condition assignment was independent of the participant's performance in the previous 24 rounds.

advised that, after 24 rounds, they had already achieved the earnings necessary to receive the 3000 Credit bonus whereas those in the *FFG* group were provided with such a distance that, even if they had misrepresented the asset in the final round to the most extreme degree, they would have not been able to reach the target. Finally, the participants in the *CTG* were provided with a distance that was below the required goal, but could be reached if they misrepresented the quality of the asset in the final round by two levels (i.e., misrepresent an asset of average quality as excellent).

## Results

### Experiment 1

#### First Analysis

##### Participants

The participants for Experiment 1 were recruited from several upper-level, undergraduate business classes (e.g., Financial Management) at a public university in the northeast United States. Eighty-two students participated in Experiment 1, which was carried out over three separate sessions. In order to create equal cells, fourteen students removed from the below target group (BTG) utilizing a random number generator similar to that in Lyubimov, Arnold, and Sutton (2013). The remaining sixty-eight participants, on average, spent 23 minutes completing the experiment and were paid a total of \$6.07, which included a flat fee of \$3 that was independent of their performance.

The demographic data for Experiment 1 is listed in *Table 14*. The data reveals that the



sample consisted of 45 males (66.2 percent) and 23 females (33.8 percent). Several business majors were represented, with most of the participants identifying as finance students (19.1 percent). Non-business and accounting majors also made up a significant portion of the sample (17.6 percent and 16.2 percent, respectively). Finally, 56 students (82.3 percent) reported their GPA as being at 3.0 or above.

#### Manipulation check

After the 24<sup>th</sup> round of selling assets, each participant was prompted to answer a manipulation check question regarding whether he or she was currently above or below the target necessary to receive a bonus. All participants passed the manipulation check.

#### Hypotheses testing

*H1* predicts that a person who falls below an earnings target will possess a higher degree of egocentrism regarding his or her perceptions of fairness than one who meets those expectations. To test this hypothesis, an ANCOVA was conducted using *Group* as the predictor/independent variable (Coded as 0 = *ATG*, 1 = *BTG*), *Egocentric Perceptions of Fairness* as the outcome/dependent variable, and *Gender* (Gender, coded as 0 = female, 1 = male) and *Audit0124* (the number of times audited and fined in the first 24 rounds) as the covariates. Since higher scores on the *Egocentric Perceptions of Fairness* questions indicate that the participant viewed his or her actions as more honest, trustworthy, and fair, the *BTG* was expected to have a higher mean on this measure than the *ATG*. The results listed in *Table 15 (Panel A)* reveal that the *BTG*'s mean score for

the *Egocentric Perceptions of Fairness* measure ( $Mean = 0.68, SD = 0.88$ ) was actually lower than that of the *ATG* ( $Mean = 1.07, SD = 0.86$ ), but this difference is statistically insignificant ( $p < .51$ ). Thus, *H1* is not supported.

*H2* through *H5* were tested utilizing the PROCESS add-in to SPSS. PROCESS is a statistical method that allows for “path analysis–based moderation and mediation analysis as well as their integration in the form of a conditional process model” (Hayes, 2013, p. 419). In particular, this method allows for testing serial multiple mediator models such as the theoretical framework used in this chapter. Furthermore, in addition to its ability to calculate the direct and indirect effects in mediation models, PROCESS can estimate unstandardized model coefficients, standards errors, *t*-values, *p*-values, and confidence intervals (Hayes, 2013).

*H2* posits that egocentric perceptions of fairness resulting from not meeting earnings expectations are positively related to the intensity of negative affect. Again, PROCESS was used to test this hypothesis with *Group* (Coded as 0 = *ATG*, 1 = *BTG*) as the predictor/independent variable, *FLR* (Coded as 0 = no fraud in last round, 1 = fraud in last round) as the outcome/dependent variable, *EPF* (egocentric perceptions of fairness) as the first mediating variable, *NA* (negative affect) as the second mediating variable, and *EFW* (ethical fading words) as the third mediating variable. *Gender* (Gender, coded as 0 = female, 1 = male) and *Audit0124* (the number of times fined for misrepresentation through 24 rounds) were included as covariates. Similar to the interpretation of the *EPF* measure, higher scores on the *NA* measure indicate a greater degree of negative affect. As such, a positive coefficient was anticipated. The results in *Table 16 (Panel A)* indicate that when *NA* is designated as the outcome variable, its relationship with *EPF* is positive (coeff. = 0.33), yet insignificant ( $p = .75$ ). Therefore, *H2* is not supported.

*H3* postulates that negative affect experienced from not reaching an earnings goal is positively related to the likelihood of ethical fading. More specifically, a person is expected to be less likely to consider the ethical implications of his or her decision if he or she is experiencing negative affect. Since the use of more ethics-related words indicates less ethical fading, *EFW*'s relationship with *NA* is expected to produce a negative coefficient. The results in *Table 16 (Panel B)* show that the relationship between *NA* and *EFW* is negative (coeff. = -0.14), but not significant ( $p = .21$ ). Thus, *H3* is not supported.

Ethical fading was also captured using a three-item measure embedded within the Zodiac and Personality Survey (labeled *EFW*). As such, another analysis was conducted substituting *EFW* for *EFQ*. A positive coefficient is expected since higher mean scores on the *EFQ* questions suggest a greater degree of ethical fading. The results listed on *Table 17 (Panel A)*, however, reflect a negative (coeff. = -0.03), but not significant ( $p = .85$ ), relationship. Thus, *H3* is still not supported when *EFQ* is employed as an alternative ethical fading measure.

*H4* predicts a positive relationship between ethical fading and unethical behavior. That is, an individual who experiences a higher degree of ethical fading is predicted to be more likely to engage in fraud. As *FLR* (Coded as 0 = no fraud in last round, 1 = fraud in last round) captures whether the participant committed fraud in the 25<sup>th</sup> and final round, its relationship with *EFW* is expected to produce a negative coefficient. The results from *Table 16 (Panel C)* reflect that the relationship between *EFW* and *FLR* is negative (coeff. = -1.44), but insignificant ( $p = .16$ ). When *EFQ* is substituted for *EFW* as presented in *Table 17 (Panel B)*, the relationship between fraud and ethical fading is still not significant ( $p = .27$ ).

*H5* posits that one that falls below an earnings target is more likely to engage in fraud than an individual who has already met his or her respective goal. To test this hypothesis, a Pearson Chi-Square test was conducted. The results in *Table 18* indicate that there was a significant association between whether an individual was above or below his or her respective earnings target after the penultimate round of selling assets and fraudulent behavior in the final round ( $\chi = 4.22, p < .05$ ). Based on the odds ratio, the odds of those individuals in the *BTG* committing fraud in the final round was 6.1 times higher than those in the *ATG*. Thus, *H5* is supported.

## Second Analysis

### Participants

A secondary analysis was conducted wherein those participants who identified themselves as accounting majors were removed. Professionals and educators believe that ethical decision-making should be a core component of an accounting student's education, especially given the corporate scandals of the late 1900s and early 2003 (Martinov-Bennie & Mladenovic, 2015). As such, accounting curricula have placed an emphasis on including ethics-related materials. While there is disagreement regarding whether ethics can be "taught" and, if so, what are the most effective methods, some research does support the idea that accounting students' ethical judgments can be positively influenced by various types of interventions (e.g., Cloninger & Selvarajan, 2010 & Green & Weber, 1997). Thus, an argument can be made that the focus on ethics in their curricula results in accounting students being more ethically sensitive, and therefore more likely to behave ethically, than other business students whose respective

discipline lacks such an emphasis.

The results from by Clikeman and Henning (2000) and Sweeney and Costello (2009) support the argument that accounting majors are more inclined to behave ethically in relation to other business students. Clikeman and Henning's (2000) findings suggest that senior accounting students, when compared to other seniors across different business majors, are more opposed to questionable acts of earnings management. More recently, the results from Sweeney and Costello (2009) suggest that the ethical intentions and judgments of accounting students are significantly higher than those of non-accounting students across various scenarios. The "socialization" aspect of accounting education and its rule-based approach may explain Clikeman and Henning's (2000) and Sweeney and Costello's (2009) results. That is, accounting majors are socialized to give "priority to financial statement users' needs, while students majoring in other business disciplines come to identify more closely with the goals of corporate managers" (Clikeman and Henning, 2000, p. 1). Furthermore, according to Shaub (1994), accounting education emphasizes a rule-based approach that is grounded in ethics. As such, given the empirical evidence that supports the notion that accounting students are perhaps more predisposed to act ethically than non-accounting majors, 12 participants (approximately 15 percent) who identified themselves as accounting majors were omitted from the analysis.

There remained 30 participants in the below target group (*BTG*) and 40 in the above target group (*ATG*) after the accounting students were removed from the data analysis. Thus, in order to create equal cells (30 per cell), ten participants were removed from the *ATG* utilizing a random number generator similar to that in Lyubimov, Arnold, and Sutton (2013). The remaining sixty participants, on average, spent 26 minutes completing the experiment and were

paid a total of \$6.04, which included a flat fee of \$3 that was independent of their performance.

The demographic data for the secondary analysis is listed in *Table 19*. The data reveals that the sample consisted of 37 males (61.7 percent) and 23 females (38.3 percent). Several business majors were represented, with most of the participants identifying as finance students (21.7 percent). Non-business majors also made up a significant portion of the sample (20 percent). Finally, 46 students (76.7 percent) reported their GPA as being at 3.0 or above.

#### Manipulation check

After the 24<sup>th</sup> round of selling assets, each participant was prompted to answer a manipulation check question regarding whether he or she was currently above or below the target necessary to receive a bonus. All participants passed the manipulation check.

#### Hypotheses testing

*H1* predicts that a person who falls below an earnings target will possess a higher degree of egocentrism regarding his or her perceptions of fairness than one who meets those expectations. To test this hypothesis, an ANCOVA was conducted using *Group* as the predictor/independent variable (Coded as 0 = *ATG*, 1 = *BTG*), *Egocentric Perceptions of Fairness* as the outcome/dependent variable, and *Gender* (Gender, coded as 0 = female, 1 = male) and *Audit0124* (the number of times audited and fined in the first 24 rounds) as the covariates. Since higher scores on the *Egocentric Perceptions of Fairness* questions indicate that the participant viewed his or her actions as more honest,

trustworthy, and fair, the *BTG* was expected to have a higher mean on this measure than the *ATG*. The results listed in *Table 20 (Panel A)* reveal that the *BTG*'s mean score for the *Egocentric Perceptions of Fairness* measure ( $Mean = 0.51, SD = 1.08$ ) was actually lower than that of the *ATG* ( $Mean = 1.01, SD = 0.76$ ). However, the results in *Table 10 (Panel B)* show that this difference is insignificant ( $p = 0.53$ ). Thus, *H1* is not supported.

Similar to the first analysis, the remaining six hypotheses were tested utilizing the PROCESS add-in to SPSS wherein *Group* (Coded as 0 = *ATG*, 1 = *BTG*) was designated as the predictor/independent variable, *FLR* (Coded as 0 = no fraud in last round, 1 = fraud in last round) the outcome/dependent variable, *EPF* (egocentric perceptions of fairness) the first mediating variable, *NA* (negative affect) the second mediating variable, and *EFW* (ethical fading words) the third mediating variable. *Gender* (Gender, coded as 0 = female, 1 = male) and *Audit0124* (the number of times fined for misrepresentation through 24 rounds) were included as covariates. *H2* posits that egocentric perceptions of fairness resulting from not meeting earnings expectations are positively related to the intensity of negative affect. Similar to the interpretation of the *EPF* measure, higher scores on the *NA* measure indicate a greater degree of negative affect. As such, a positive coefficient was anticipated. The results in *Table 21 (Panel A)* indicate that when *NA* is designated as the outcome variable, its relationship with *PU* is positive (coeff. = 0.12), yet insignificant ( $p = .23$ ). Therefore, *H2* is not supported.

*H3* postulates that negative affect experienced from not reaching an earnings goal is positively related to the likelihood of ethical fading. Since the use of more ethics-related words indicates less ethical fading, *EFW*'s relationship with *NA* is expected to produce a negative coefficient. The results in *Table 21 (Panel B)* show that the relationship between *NA* and *EFW* is

negative (coeff. = -0.20), but not significant ( $p = .12$ ). When *EFW* is replaced with *EFQ*, the results listed on *Table 22 (Panel A)* also show an insignificant ( $p = .17$ ), relationship. Thus, *H3* is not supported when either the *EFW* or the *EFQ* is employed as the ethical fading measure.

*H4* predicts a positive relationship between ethical fading and unethical behavior. As *FLR* (Coded as 0 = no fraud in last round, 1 = fraud in last round) captures whether the participant committed fraud in the 25<sup>th</sup> and final round, its relationship with *EFW* is expected to produce a negative coefficient. The results from *Table 21 (Panel C)* reflect that the relationship between *EFW* and *FLR* is negative (coeff. = 0.56) and marginally significant ( $p < .09$ ). Thus, *H4* is somewhat supported when *EFW* is used as the ethical fading measure. However, when *EFQ* is substituted for *EFW* as presented in *Table 22 (Panel B)*, the relationship between fraud and ethical fading is not significant ( $p = .58$ ).

*H5* posits that one that falls below an earnings target is more likely to engage in fraud than an individual who has already met his or her respective goal. To test this hypothesis, a Pearson Chi-Square test was conducted. The results in *Table 23* indicate that there was a significant association between whether an individual was above or below his or her respective earnings target after the penultimate round of selling assets and fraudulent behavior in the final round ( $\chi = 7.68, p < .01$ ). Based on the odds ratio, the odds of those individuals in the *BTG* committing fraud in the final round was 12.4 times higher than those in the *ATG*. Thus, *H5* is supported.



## Experiment 2

### Participants

A total of 90 students participated in Experiment 2. Accounting students were omitted from data analysis (a total of 19 participants, 21.1 percent) and a random number generator was then used to equalize the cells. After equalizing the cells, there was a total of 63 participants (21 per cell) whose data was used in the analysis. The participants in Experiment 2, on average, spent 21 minutes completing the experiment and were paid a total of \$5.97, which included a flat fee of \$3 that was independent of their performance.

The demographic data for Experiment 2 is listed in *Table 24*. The data reveals that the sample consisted of 32 males (50.8 percent) and 31 females (49.2 percent). Several business majors were represented, with most of the participants identifying as supply-chain management students (25.4 percent). Marketing majors also made up a significant portion of the sample (22.2 percent). Fifty-one students (80.9 percent) reported their GPA as being at 3.0 or above. Finally, the participants, on average, had taken at least two accounting courses (mean = 2.19).

### Hypothesis Testing

*H6* postulates that an individual who is close, but still below, an earnings target is more likely to engage in fraud than one that either is further from the goal or has already met that mark. To test this hypothesis, a Pearson Chi-Square test was conducted utilizing the data from Experiment 2. The results in *Table 25* indicate that there was a significant association between an individual's distance to an earnings target after the penultimate round of selling assets and

fraudulent behavior in the final round ( $\chi = 6.30, p < .01$ ).<sup>25</sup> Based on the odds ratio, the odds of those individuals in the “close-to-goal” group (*CTG*) committing fraud in the final round was 4.4 times higher than those in both the “far-from-goal” (*FFG*) and the “reached goal” (*RG*) groups. As such, *H6* is supported.

### Discussion

Results from the first analysis suggest that individuals who are below an earnings goal are more inclined to misrepresent than those who have already met that target. None of the other hypothesized relationships were supported, however. A second analysis was conducted wherein those participants who identified themselves as accounting students were culled from the sample. The significant change in the results between the two analyses provides some support to the idea that the “socialization” aspect of their education makes accounting majors “different” from other business majors with respect to their ethical decision-making and/or moral awareness (e.g., Clikeman & Henning, 2000; Sweeney & Costello, 2009). As such, removing accounting students from the sample pool was appropriate.

Results from the second analysis indicate that fraud is more likely to occur as the individual experiences a higher degree of ethical fading, but this relationship was only moderately significant. Furthermore, the results indicate that those individuals who are closest to meeting an earnings target carry the highest probability of fraudulent behavior. The analysis

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<sup>25</sup> The association between an individual’s distance to an earnings target after the penultimate round of selling assets and fraudulent behavior in the final round was still significant when accounting students were added back into the sample.

failed to find any support that one's egocentric perceptions of fairness and negative affect contribute towards his or her behavior in the context of goal achievement, however. This lack of significance for egocentric perceptions of fairness and negative affect could be the result of a few factors. One is that, in the context of goal achievement, these constructs are actually insignificant with respect to their influence on behavior. The second factor that may explain the absence of significance for egocentrism and negative affect is the possible misspecification of TUAB. In particular, key mediating and/or moderating variables, especially those related to individual characteristics, may have been excluded from the model that, when included, could have significant indirect effects and would thus warrant the inclusion of those constructs into the model.

Finally, caution should be exercised in interpreting these results. One reason is that ethical fading was only significant as a predictor of fraud when it was measured utilizing one's performance on a word completion exercise (*EPW*) rather than his or her responses to questions about how decisions in the asset-selling task were framed (*EPQ*). As with any new construct, more research is needed regarding how to best measure ethical fading. Furthermore, one should be mindful of the substantial change in the results when those participants who identified themselves as accounting students were removed from the sample. Further study is necessary to explore whether the incorporation of ethics related material in their curricula makes accounting students more "immune" to ethical fading.

## Conclusion

Fraud is conceptualized as an intentional act by a manager who was willing to abandon his or her ethics for personal gain. Furthermore, simplistic explanations are often provided regarding one's motivation to initially engage in fraud. The demographic and anecdotal evidence, however, suggests that the majority of fraudsters are of the "accidental type." That is, these fraudsters did not intend to act unethically yet somehow became trapped in a vicious cycle of unethical actions to conceal their actions. Thus, understanding the motivations for financial statement fraud and the nature of the act itself may require a more nuanced investigation into the psychological processes underlying a manager's decision-making.

Murphy and Dacin (2011) contend that characteristics of the business climate, such as the pressure to meet earnings expectations, can encourage managers to commit fraud without the self-awareness that they are behaving unethically. This lack of awareness can possibly be explained by ethical fading, a mechanism wherein one's inherent psychological constraints, such as biases or heuristics, fade any moral considerations from the decision-making process. Thus, identifying the psychological processes that enable ethical fading, as well as the contextual influences on those operations, can contribute towards a more robust understanding of accounting fraud. The purpose of this chapter is to examine how a particular contextual factor, the pressure to meet earnings forecasts, produces egocentric perceptions of fairness and negative affect that influence the likelihood of one engaging in ethical fading and fraudulent behavior.

The Theory of Unintended Amoral Behavior (Chapter 2, hereafter TUAB), which includes the concept of ethical fading, is utilized to predict that a manager who is short of meeting an earnings forecasts will manufacture the egocentric perspective that unfair

circumstances are to blame for his or her failure in reaching the goal. Furthermore, it is predicted that this egocentric perspective will produce negative affect, which in turn increases the probability of ethical fading, and thus fraudulent behavior, in the manager who falls below earnings estimates. Finally, TUAB (Chapter 2) is used to hypothesize that those who are below, yet close, to an earnings target are more likely to commit fraud than managers who either have reached the goal or are far from it.

Two experiments utilizing an asset-selling task were conducted to test the predictions. Across both experiments, the participants were required to sell an asset to a computerized buyer whereupon they could earn money on each successful transaction. Before each attempted sale, however, the participants had the opportunity to misrepresent the value of their assets in order to sell them at higher prices. The participants also had the potential to earn a bonus based on their performance (Experiment 1) or group assignment (Experiment 2). The participants' egocentric perceptions, negative affect, ethical fading, and fraudulent behavior were measured and/or observed across the two experiments.

The results from the first experiment suggests that fraud is more likely to occur as the individual experiences a higher degree of ethical fading, but this was true for only one measure of ethical fading (a word-completion exercise). Furthermore, the findings from the second experiment suggest that individuals who are closest to meeting an earnings goal carry the highest probability of fraudulent behavior. There was a lack of support that one's egocentric perceptions of fairness and negative affect contribute towards his or her ethical behavior, however.

This chapter is not without its limitations. The first being that ethical fading was only related to misreporting behavior when accounting students were removed from the sample. The

substantial change in the results between the two analyses suggests that the “socialization” aspect of their education makes accounting majors somehow “different” from other business majors with respect to their ethical sensitivity. Further research is needed to determine whether the inclusion of ethics related material into their curricula makes accounting students more resistant to ethical fading.

The second limitation of this chapter is that the samples consist of upper-level business students which, when used as a proxy for professionals and quasi-professionals, has been controversial. One argument against the use of student samples is that the education, experience, and socialization of professionals provide them with the cognitive tools and the motivation to behave more ethically than students. Bazerman and Tenbrunsel (2011), however, argue that the psychology processes that constrain one’s ability to act in an ethical manner are “ordinary” since they “affect even very honest and smart people, including managers, executives, and other professionals” (p. 45). Nevertheless, the research comparing the ethical behavior of business students to professionals has been mixed. The second limitation of this chapter is that the ethical fading was only significant as a predictor of fraud when it was measured based on the participant’s performance on a word-completion task. As with any new construct, how to best measure ethical fading is still unresolved and requires further research.

The key contribution of this chapter is that it provides support to the idea that ethical fading is influential in determining whether a person engages in fraud. This finding runs counter to the common notion that fraud is an intentional sacrifice of one’s ethics for some other desired goal (e.g., profit). Furthermore, this chapter indicates that the proximity to an earnings target matters in determining whether one will engage in fraud. That is, those managers who are the

closest to, yet below, an earnings target are the most likely to engage in fraud. Finally, this research may also provide specific contributions to the auditing profession, organizations, regulators, and researchers.

With respect to the audit profession, an understanding of how certain contextual factors that may lead to unethical behavior may result in improved fraud detection. Furthermore, provided the subconscious nature of ethical fading, this chapter suggests that auditors might reconsider the substantial value they attach to management's character and attitude when conducting their fraud risk assessments. At an organizational level, an understanding of bounded ethicality and ethical fading might allow for the implementation of fraud controls aimed at mitigating the contextual factors that can influence unethical behavior. In addition, a manager who is knowledgeable about common biases and heuristics might be more psychologically prepared when confronted with an ethical decision. This chapter also suggests that regulators consider the difference between intentional corruption and unintentional bias, and the factors that drive such bias, if they are to establish legislation that is more effective at deterring fraud. Finally, this chapter contributes to research by both serving as an early test of TUAB (Chapter 2) and identifying a key contextual factor that limits an individual's ability to act ethically.

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## CHAPTER 5: GENERAL CONCLUSION

The three studies in this dissertation apply the concepts of bounded ethicality and ethical fading to explain the decision-making that underlies unethical behavior or accounting fraud, in particular. Behavioral ethics, from which these concepts emerged, is a relatively new field of study and as typical with emerging areas of research, the theoretical models are nebulous and thus not well-specified (Tenbrunsel & Smith-Crowe, 2008). As such, Study 1 combined disparate, but complimentary, theories and ideas from behavioral ethics and psychology to create a theory, the Theory of Unintended Amoral Behavior (TUAB), which includes the concepts of bounded ethical and ethical fading. Studies 2 and 3 applied TUAB (Chapter 2) to examine how contextual stimuli affect the psychological operations outlined in TUAB that, in turn, can lead to fraudulent behavior. Specifically, Study 2 examined how a lower rate-of-pay for managers in relation to their peers can trigger egocentric biases of unfairness that, in sequence, provoke envy and ethical fading, which together increase the likelihood of fraudulent behavior in those managers. Study 3 explored how the pressure to meet earnings forecasts can elicit, in progression, egocentric perceptions of fairness, a general negative affect, ethical fading, and acts of fraud in those managers who fall below their expected financial goals. The unique contributions of each of these studies will now be addressed, followed by brief discussions regarding the overall contributions of this dissertation and avenues for future research.

The purpose of Study 1 was to develop a theory that combines the concepts of bounded ethicality and ethical fading. In sum, TUAB (Chapter 2), states that task-specific and quasi-static environmental factors (e.g., an organization's culture) can provoke certain, inherent biases and heuristics. If those biases related to upholding one's perception of self-worth, in particular, are

triggered, then the person will interpret the contextual stimuli in a distorted manner to create the idea that the preferred outcome (i.e., the action that restores his or her sense of self-worth) is the most “fair.” These evaluations of the stimuli are primitive, that is, effortless and automatic, and thus do not feel biased in any way. Furthermore, TUAB states (Chapter 2) that in addition to interpreting contextual information in an egocentric manner, the triggering of biases will, in turn, elicit negative affect for which the person will be motivated to eliminate quickly and without utilizing considerable cognitive effort. As such, if an unethical action eliminates any negative affect from a threatened sense of self-worth, then the individual’s affect-laden intuition will suggest that such an action is “appropriate” or even “good” since it is the most emotionally appealing. At this point, the person is engaging in the act of substitution where he or she is replacing a difficult question (e.g., “is this action ethical?”) with an easier one (e.g., “will this action make me feel better?”). Ethical fading is now occurring, according to TUAB (Chapter 2), since the individual is no longer considering the moral implications of the alternative actions. The pressure to meet earnings forecasts is discussed through the lens of TUAB as an example of how one may unknowingly behave in manner contrary to his or her moral principles.

The primary contribution of Study 1 is that it provides a testable theory that differentiates between unintentional and intentional immoral behavior through its inclusion of the ethical fading concept and the noted systematic, psychological errors that constrain one’s ability to act ethically. As discussed in Study 1, TUAB (Chapter 2) has the potential to explain unethical behavior across the different functional areas of accounting research. With respect to Financial Accounting research, TUAB (Chapter 2) can explain how disclosures and the ambiguity in standards can actually exacerbate unethical behavior. In the AIS research area, TUAB (Chapter

2) can be used to address whether information systems create an environment of instrumental rationality wherein the focus of establishing the most effective and efficient processes overshadows any consideration of whether carrying out those processes is ethical. TUAB (Chapter 2) can also explain why auditors sometimes forfeit their professional responsibilities and acquiesce to their clients that are pushing beyond the boundaries of law and regulation. In addition, this theory can explain unethical behavior in the Tax research area such as tax avoidance and tax compliance. Finally, in regards to the Management Accounting area, TUAB (Chapter 2) can be utilized to address a host of deviant behaviors such as the misappropriation of assets, bribery, and transfer pricing manipulation. Furthermore, this theory can be applied to the ethical and quasi-ethical issues related to budgeting and performance measurement such as dishonesty in budgeting, the formulation of budgetary slack, biased performance evaluation, and performance measurement falsification.

The results from Study 2 indicate that one who is paid at a lower rate is more likely to view this discrepancy as unfair as opposed to one who is paid at a higher rate, and that this egocentric view regarding the pay inequity produces a feeling of envy in that person who is paid less. However, the prediction that an individual who is experiencing a higher degree of envy would be more likely to fade ethically was unsupported. The supplemental analysis suggests that one's preference for risk may moderate the relationship between negative affect (i.e., envy) and ethical fading. That is, when envy is high, those people who are either risk-neutral or risk-seeking are more likely to experience ethical fading as opposed to those who are more risk-averse. Findings from Study 2 also indicate that a person who is experiencing a higher degree of ethical fading is more likely to misrepresent and that ethical fading, along with perceived

unfairness, are significant processes that mediate the relationship between pay inequity and fraudulent behavior.

The main contribution of Study 2 is that it provides initial support of TUAB (Chapter 2) and identifies a key contextual factor, pay inequality, and its influence on the psychological processes that constrain ethical decision-making. Furthermore, Study 2 also contributes to the psychology and behavioral ethics literatures in that it offers evidence that unethical behavior is not necessarily the result of a person consciously abandoning his or her moral principles. Finally, the supplemental analysis from this study suggests that individual characteristics (i.e., personality traits) may have mediating or moderating effects among the relationships outlined in TUAB (Chapter 2), thus providing research avenues to further specify the theoretical model.

The findings from Study 3 also suggest that one is more likely to misrepresent if he or she is experiencing a higher degree of ethical fading. The relationship between ethical fading and misrepresentation in this study, however, was only moderately significant. The results from Study 3 also suggest that those people who are closest, yet still below, a financial goal are the most likely to engage in fraudulent behavior. Finally, the findings of this study did not support the predictions regarding the relationships between egocentric perceptions of fairness and a generalized, negative affect and between that affect and ethical fading.

The primary contribution of Study 3 is that it also provides some support, although mixed, that ethical fading is influential in determining whether an individual engages in fraudulent behavior. Much like Study 2, this result runs counter to the idea that fraudulent behavior is an intentional act. Study 3 further contributes to the accounting, behavioral ethics,



and management literatures by identifying an important contextual factor that influences this process, the pressure to meet earnings forecasts.

Overall, this dissertation provides three important contributions to the accounting, behavioral ethics, management, and psychology literatures. The first contribution is that it unifies disparate, but related, theories and concepts from psychology and behavioral ethics to establish a testable theory (TUAB) that includes the concepts of bounded ethicality and ethical fading. Bazerman and Tenbrunsel (2011) argue that traditional models of ethical decision-making such as Rest (1986) and Kohlberg (1973) rely on the tenuous assumption that judgments are based on a rational, linear thought-process. In particular, they argue that these models assume that (1) awareness is required for a decision to have ethical implications, (2) reasoning will guide an individual's judgment (moral judgment), (3) and moral intention is necessary for one to understand his or her action (moral intention). Research in psychology and behavioral ethics, however, suggests that individuals often (1) lack moral awareness, (2) judge before using moral reasoning, and (3) misjudge moral intention (Bazerman & Tenbrunsel, 2011). As such, this research, which allows for the influences of emotions, the subconscious, and intuition in decision-making, highlights the limitations of rationalist models (Tenbrunsel & Smith-Crowe, 2008). This dissertation thus contributes to research by introducing a model that differentiates between intentional and unintentional behavior by considering the systematic, psychological errors that constrain one's ability to make an ethical decision, as well as the contextual factors that trigger those errors. In regards to accounting research in particular, TUAB (Chapter 2) can be applied to predict and/or explain unethical behavior across the different functional areas of accounting. Furthermore, this dissertation extends Murphy and Dacin's (2011) framework that

identifies the psychological pathways an individual may follow when unintentionally engaging in fraud.

The second key contribution of this dissertation is that it provides some initial support of TUAB (Chapter 2). In particular, it offers evidence that unethical behavior (i.e., fraud), through the mechanism of ethical fading, may not necessarily be the result of an individual consciously forsaking his or her moral principles for some other desired goal. Finally, with respect to research, this dissertation identifies some of the psychological processes suggested by bounded ethicality that limit one's ability to make an ethical decision (i.e., egocentric perceptions of unfairness) as well as two important contextual factors (i.e., pay inequities and earnings targets) that trigger those processes. This research also offers potential contributions to auditors, management, and regulators.

In regards to the audit profession, auditors may improve their fraud detection capabilities by understanding how the psychological processes described in TUAB (Chapter 2) (i.e., biases, emotions, and ethical fading) influence decision-making. This dissertation also suggests that auditors reconsider the substantial value they attach to management's character and attitude when conducting their fraud risk assessments, especially given the subconscious effects of ethical fading. Furthermore, knowledge of those psychological processes that impede ethical decision-making may prepare auditors to better defend their position when negotiating with clients who are pushing beyond the boundaries of law and regulation. At an organizational level, an awareness of bounded ethicality and ethical fading could lead to the implementation of fraud controls that are more effective at mitigating the contextual factors that influence unethical behavior. In addition, a manager who is knowledgeable about common biases and heuristics

might be more sensitive to the ethical implications of the alternative decisions that he or she faces. Finally, this dissertation suggests that regulators should acknowledge the difference between intentional corruption and unintentional bias, and the factors that drive such bias, if they are to formulate legislation that is more effective at deterring fraud or other deviant behavior.

More research is required to assess TUAB's (Chapter 2) explanatory power regarding the unethical behaviors of professional accountants and managers. Research should focus on both examining the relationship between ethical fading and unethical behaviors and identifying those psychological operations (i.e., biases, heuristics and emotions) that cause ethical fading across various accounting contexts. The results from Studies 2 and 3 suggest that ethical fading can result from a multitude of biases and emotions that vary across situations due to factors that are specific to particular contexts.

Research on how to best measure ethical fading is also needed since it is a relatively new construct. In Study 2, ethical fading was only significant as a predictor of fraud when it was measured using questions about how the participant framed his or her decisions rather than his or her responses to a word completion exercise, which has been used successfully in psychological studies to capture implicit cognitive processes. In Study 3, however, the relationship between ethical fading and misrepresentation was moderately significant when the word completion exercise, rather than the framing questions, was used. With respect to Study 2, one explanation that may explain the difference in the results produced by the two measures is that, in the experimental procedure, the word completion exercise was much further away from the questions that addressed the participant's perceptions of unfairness and feelings of envy than the alternate ethical fading measure.

Furthermore, research should explore how individual characteristics (e.g., personality traits) affect the psychological processes outlined in TUAB (Chapter 2). The results from the supplemental analysis in Study 2 suggest that one's risk preference moderates the relationship between ethical fading and misrepresentation. However, the effect of risk preference on the relationship between episodic envy and ethical fading was analyzed independently from the overall model due to the constraints of the data. As such, when included in the model, the significance of an individual's risk preference as a moderator may become muted as well as the other relationships as currently defined in TUAB (Chapter 2). Correspondingly, the lack of significance for egocentric perceptions of fairness and negative affect in Study 3 could be the result of key mediating and/or moderating variables that have been excluded from the model that, when included, could have significant indirect effects and would thus warrant the inclusion of those constructs into the model. At any rate, identifying the potential moderating and/or mediating effect of individual characteristics can provide research avenues to further specify the theoretical model.

Finally, more research is needed to determine whether the inclusion of ethics related material in their curricula makes accounting students more "immune" to ethical fading. For the most part, the results for Studies 2 and 3 only held when accounting students were culled from the sample. This substantial change in the results between analyses suggests that the "socialization" aspect of their education makes accounting majors "different" from other business majors with respect to their ethical sensitivity and/or ethical decision-making, which is consistent with other studies (e.g., Clikeman & Henning, 2000; Sweeney & Costello, 2009).

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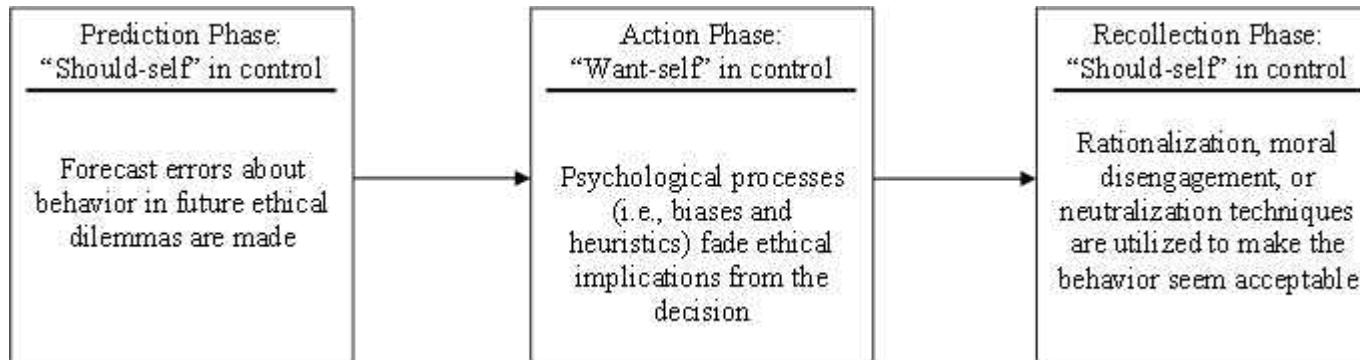
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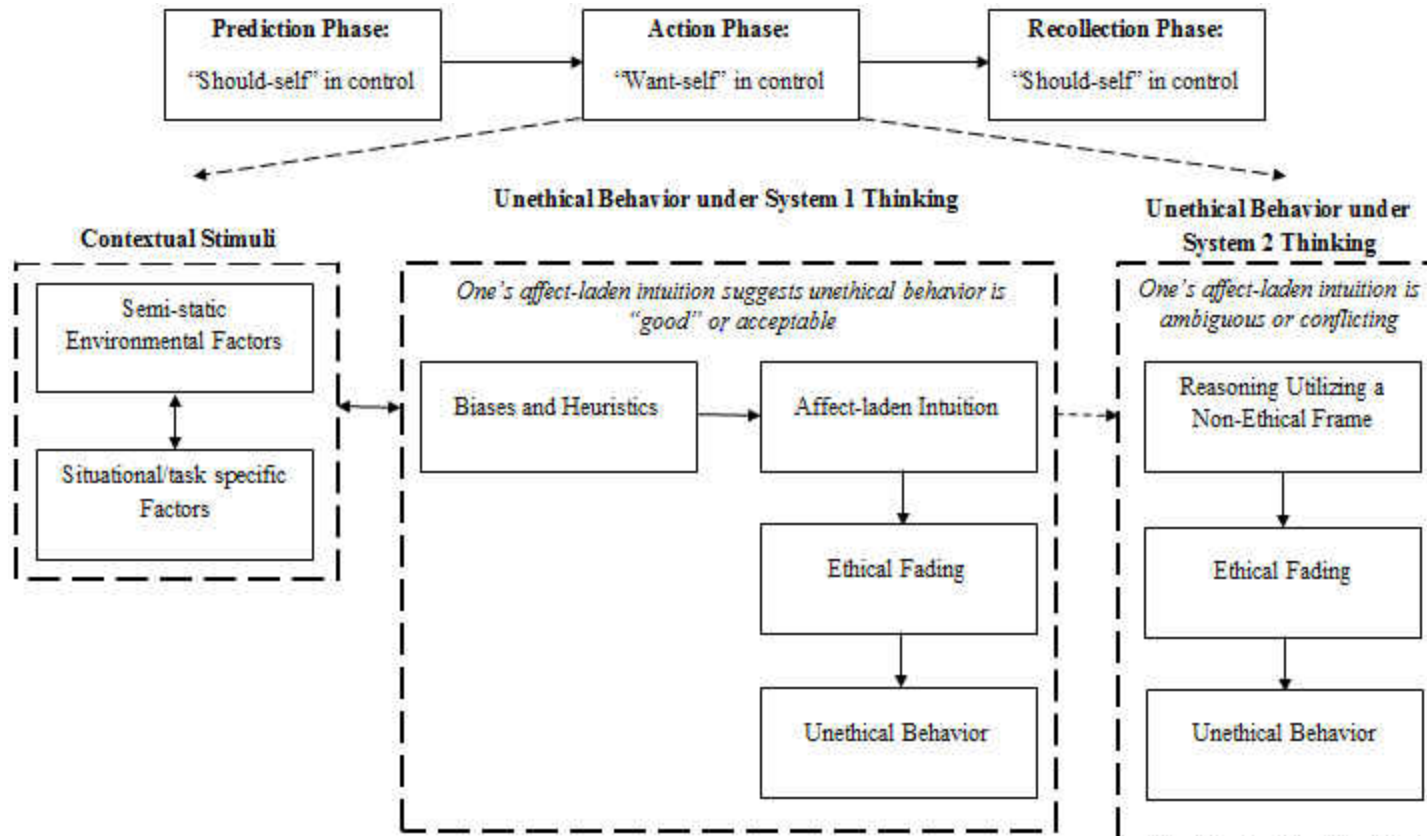
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## **APPENDIX A: FIGURES**



**Figure 1: A Temporal Explanation of “Want” versus “Should-self” Conflict**



**Figure 2: The Theory of Unintended Amoral Behavior**



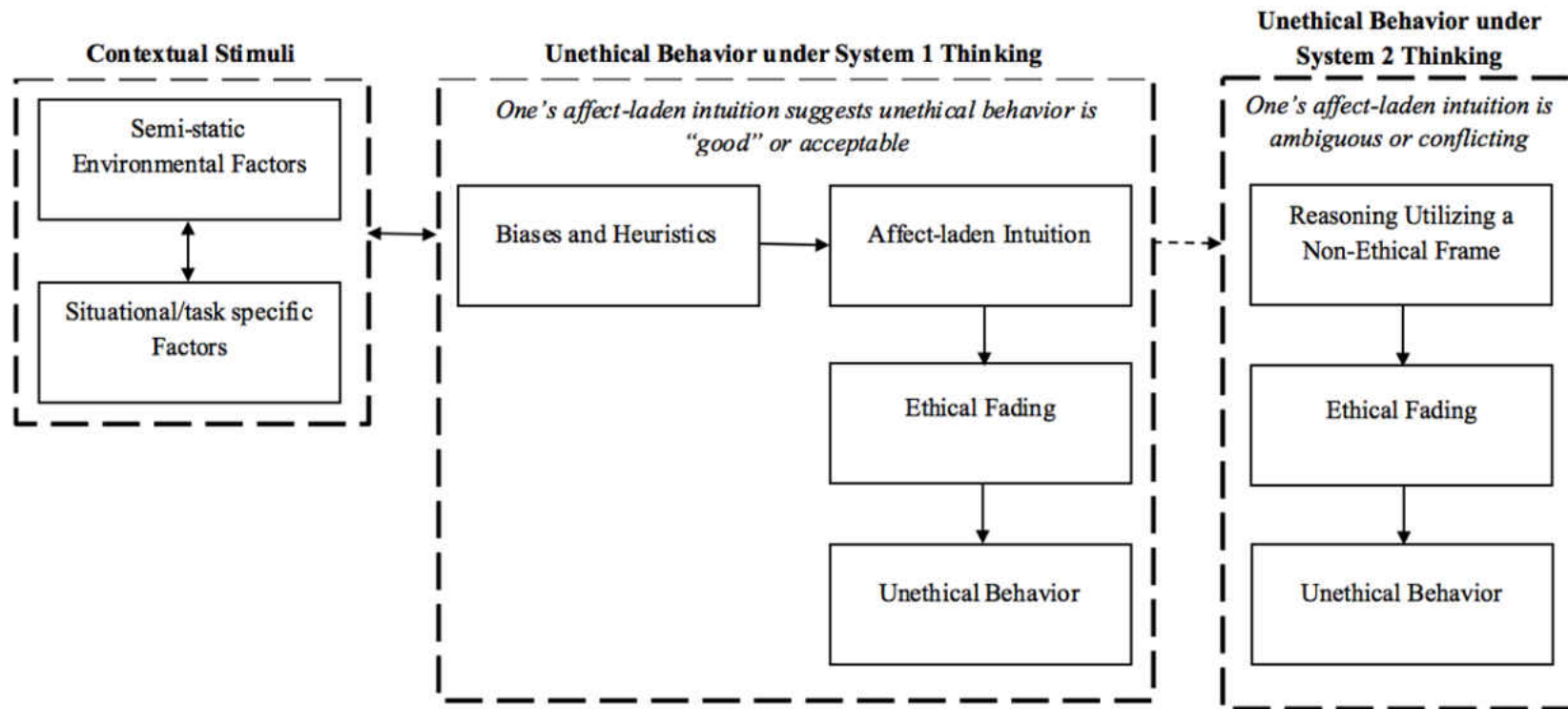
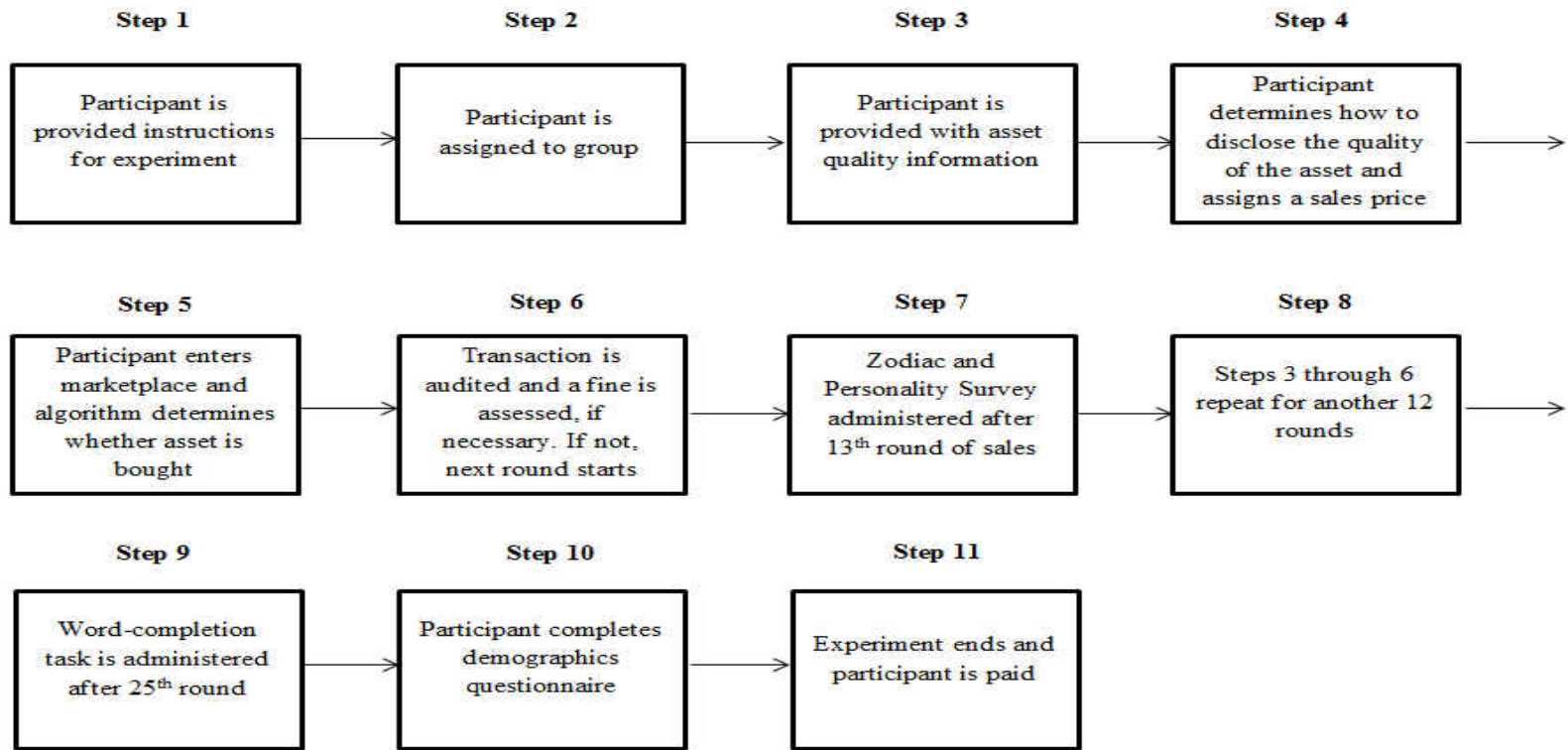
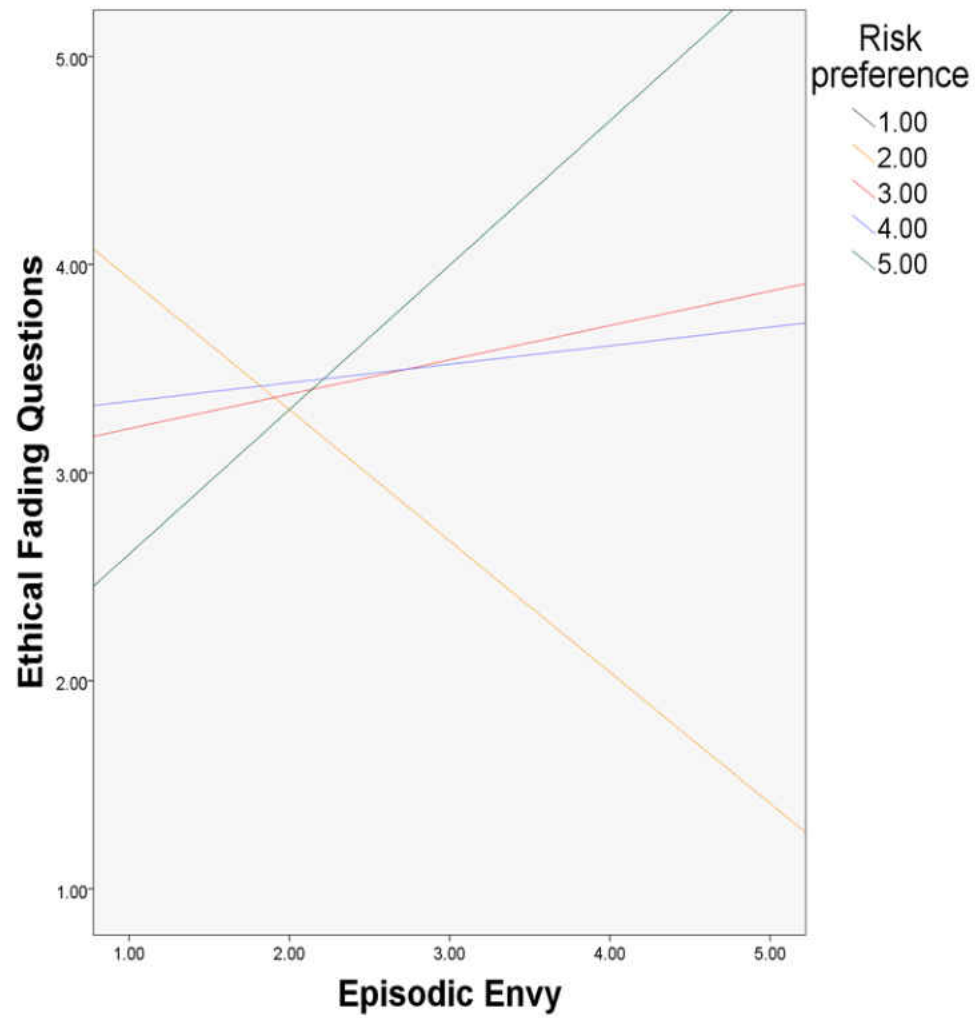


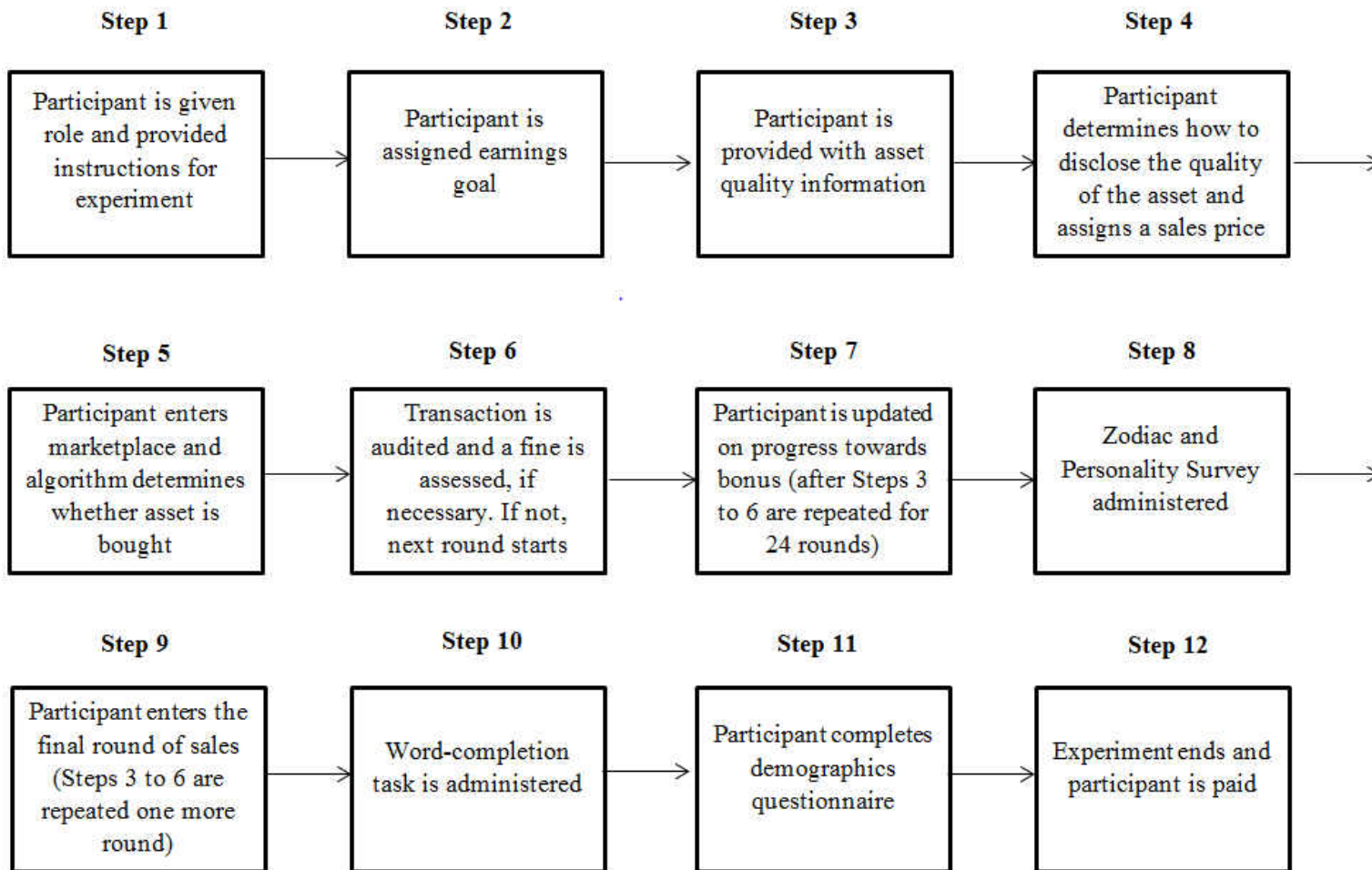
Figure 3: The Theory of Unintended Amoral Behavior (adopted from Chapter 2)



**Figure 4: Chapter 3 Experimental Procedure**



**Figure 5: Chapter 3 Moderating Effect of Risk Preference on Ethical Fading (EFQ)**



**Figure 6: Chapter 4 Experimental Procedure**

## **APPENDIX B: TABLES**

**Table 1: Chapter 3 Descriptive Statistics (First Analysis)**

	<b>Number</b>	<b>Percent</b>
<b>Gender</b>		
Female	27	36.0%
Male	48	64.0%
<b>Undergraduate Major</b>		
Accounting	21	28.0%
Business Administration	1	1.3%
Economics	4	5.3%
Entrepreneurial Management	3	4.0%
Finance	9	12.0%
General Business	4	5.3%
Global Business Management	3	4.0%
Marketing	15	20.0%
Non-business	7	9.3%
Supply-chain Management	6	8.0%
Unidentified	2	2.7%
<b>GPA</b>		
4.0 - 3.5	23	30.7%
3.4 - 3.0	34	45.3%
2.9 - 2.5	16	21.3%
2.4 - 2.0	2	2.7%
Below 2.0	0	0.0%
	<b>Mean</b>	<b>Standard Deviation</b>
<b>Number of Accounting Courses</b>	3.25	2.14
<i>N = 75</i>		

**Table 2: Chapter 3 ANCOVA Test of *H1* (First Analysis)**

**Panel A: Descriptive Statistics (Dependent Variable: Perceived Unfairness)**

Group	Mean	Std. Deviation	N
High-pay group	2.4474	.82642	38
Low-pay group	2.6081	.73253	37
Total	2.5267	.78043	75

*Group = Randomly Assigned Condition (High-pay group = 0, low-pay group = 1 )*

**Panel B: Tests of Between-Subjects Effects (Dependent Variable: Perceived Unfairness)**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
<b>Corrected Model</b>	1.245	2	.623	1.023	.365	.028
<b>Intercept</b>	187.021	1	187.021	247.529	.000	.810
Predictor:						
<b>Group</b>	.714	1	.714	5.113	.282	.016
Covariate:						
<b>Gender</b>	.761	1	.761	.613	.267	.017
<b>Error</b>	43.826	72	.609			
<b>Total</b>	523.875	75				
Corrected Total	45.072	74				

*R Squared = .028 (Adjusted R Squared = .001)*

*Gender = Gender (Female = 0, Male = 1)*

**Table 3: Chapter 3 PROCESS Tests of H2, H3, & H4 (First Analysis, with EFQ)**

**Panel A: Direct Effect of Perceived Unfairness (PU) on Episodic Envy (EE)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	1.2054	.2760	4.3668	.0000	.7453	1.6654
Predictor:						
<b>PU</b>	.3067	.0945	3.2463	.0018	.1492	.4642
Covariate:						
<b>Gender</b>	-.0020	.1544	-.0128	.9898	-.2593	.2554

**Panel B: Direct Effect of Episodic Envy (EE) on Ethical Fading (EFQ)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	3.3836	.3687	9.1780	.0000	2.7691	3.9982
Predictor:						
<b>EE</b>	.0263	.1407	.1871	.8521	-.2083	.2609
Covariate:						
<b>Gender</b>	-.0494	.1831	-.2697	.7882	-.3546	.2558

**Panel C: Direct Effect of Ethical Fading (EFQ) on Fraud (FCL5)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	-1.2011	0.9208	-1.3044	.1964	-2.7363	.3341
Predictor:						
<b>EFQ</b>	.2516	.2011	1.2508	.2152	-.0838	.5869
Covariate:						
<b>Gender</b>	.8064	.3083	2.6160	.0109	.2925	1.3203

Model 6 Variables ( $N = 75$ ):

$Y =$  FCL5 (Number of frauds in rounds 14 through 18)

$X =$  Group (High-pay group = 0, Low-pay group = 1)

*Mediator 1* = PU (Perceived unfairness)

*Mediator 2* = EE (Episodic Envy)

*Mediator 3* = EFQ (Ethical fading questions)

*Control 1* = Gender (0 = Female, 1 = Male)



**Table 4: Chapter 3 PROCESS Tests of H3 & H4 (First Analysis, with EFW)**

**Panel A: Direct Effect of Episodic Envy (EE) on Ethical Fading (EFW)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	.8217	.2712	3.0300	.0034	.3697	1.2738
Predictor:						
<b>EE</b>	-.0600	.1035	-.5794	.5642	-.2325	.1126
Covariate:						
<b>Gender</b>	-.1126	.1347	-.8363	.4058	-.3372	.1119

**Panel B: Direct Effect of Ethical Fading (EFW) on Fraud (FCL5)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	-.4282	.6666	-.6423	.5228	-1.5396	.6832
Predictor:						
<b>EFW</b>	.0953	.2762	.3448	.7313	-.3653	.5558
Covariate:						
<b>Gender</b>	.8047	.3129	2.5721	.0123	.2831	1.3263

Model 6 Variables ( $N = 75$ ):
---------------------------------

$Y =$  FCL5 (Number of frauds in rounds 14 through 18)

$X =$  Group (High-pay group = 0, Low-pay group = 1)

*Mediator 1* = PU (Perceived unfairness)

*Mediator 2* = EE (Episodic envy)

*Mediator 3* = EFW (Ethical fading words)

*Control 1* = Gender (0 = Female, 1 = Male)

**Table 5: Chapter 3 PROCESS Tests of H5, H6, & H7 (First Analysis, with EFQ)**

**Panel A: Indirect Effect of Pay Disparity on Fraud through Perceived Unfairness**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Perceived Unfairness (PU)	.0504	.0715	-.0096	.2515

**Panel B: Indirect Effect of Pay Disparity on Fraud through Episodic Envy**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Episodic Envy (EE)	.0151	.1142	-.1555	.2222

**Panel C: Indirect Effect of Pay Disparity on Fraud through Ethical Fading**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Ethical Fading (EFQ)	.0648	.0856	-.0126	.2921

*LLCI = Lower-level confidence interval  
ULCI = Upper-level confidence interval*

Model 6 Variables (N = 75):
-----------------------------

- Y = FCL5 (Number of frauds in rounds 14 through 18)
- X = Group (High-pay group = 0, Low-pay group = 1)
- Mediator 1 = PU (Perceived unfairness)
- Mediator 2 = EE (Episodic envy)
- Mediator 3 = EFW (Ethical fading words)
- Control 1 = Gender (0 = Female, 1 = Male)

**Table 6: Chapter 3 PROCESS Tests of H5, H6, and H7 (First Analysis, with EFW)**

**Panel A: Indirect Effect of Pay Disparity on Fraud through Perceived Unfairness**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Perceived Unfairness (PU)	.0490	.0742	-.0122	.2485

**Panel B: Indirect Effect of Pay Disparity on Fraud through Episodic Envy**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Episodic Envy (EE)	.0079	.0477	-.0619	.0974

**Panel C: Indirect Effect of Pay Disparity on Fraud through Ethical Fading**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Ethical Fading (EFW)	-.0086	.0226	-.0567	.0182

*LLCI = Lower-level confidence interval*  
*ULCI = Upper-level confidence interval*

Model 6 Variables (N = 75):
-----------------------------

- Y = FCL5 (Number of frauds in rounds 14 through 18)
- X = Group (High-pay group = 0, Low-pay group = 1)
- Mediator 1 = PU (Perceived unfairness)
- Mediator 2 = EE (Episodic envy)
- Mediator 3 = EFW (Ethical fading words)
- Control 1 = Gender (0 = Female, 1 = Male)

**Table 7: Chapter 3 Descriptive Statistics (Second Analysis)**

	<b>Number</b>	<b>Percent</b>
<b>Gender</b>		
Female	18	33.3%
Male	36	66.7%
<b>Undergraduate Major</b>		
Business Administration	1	1.9%
Economics	4	7.4%
Entrepreneurial Management	3	5.6%
Finance	9	16.7%
General Business	4	7.4%
Global Business Management	3	5.6%
Marketing	15	27.8%
Non-business	7	13.0%
Supply-chain Management	6	11.1%
Unidentified	2	3.7%
<b>GPA</b>		
4.0 - 3.5	12	22.2%
3.4 - 3.0	27	50.0%
2.9 - 2.5	13	24.1%
2.4 - 2.0	2	3.7%
Below 2.0	0	0.0%
	<b>Mean</b>	<b>Standard Deviation</b>
<b>Number of Accounting Courses</b>	2.43	0.96
<i>N = 54</i>		

**Table 8: Chapter 3 ANCOVA Test of *H1* (Second Analysis)**

**Panel A: Descriptive Statistics (Dependent Variable: Perceived Unfairness)**

Group	Mean	Std. Deviation	N
High-pay group	2.3796	.80375	27
Low-pay group	2.8056	.62532	27
Total	2.5926	.74495	54

*Group = Randomly Assigned Condition (High-pay group = 0, low-pay group = 1 )*

**Panel B: Tests of Between-Subjects Effects (Dependent Variable: Perceived Unfairness)**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
<b>Corrected Model</b>	2.769	2	1.385	2.650	.080	.094
<b>Intercept</b>	129.312	1	129.312	247.529	.000	.829
Predictor:						
<b>Group</b>	2.671	1	2.671	5.113	.028	.091
Covariate:						
<b>Gender</b>	.320	1	.320	.613	.437	.012
<b>Error</b>	26.643	51	.522			
<b>Total</b>	392.375	54				
Corrected Total	29.412	53				

*R Squared = .094 (Adjusted R Squared = .059)*

*Gender = Gender (Female = 0, Male = 1)*

**Table 9: Chapter 3 PROCESS Tests of H2, H3, & H4 (Second Analysis, with EFQ)**

**Panel A: Direct Effect of Perceived Unfairness (PU) on Episodic Envy (EE)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	1.1497	.3655	3.1455	.0028	.5371	1.7622
Predictor:						
<b>PU</b>	.3409	.1298	2.6254	.0115	.1233	.5585
Covariate:						
<b>Gender</b>	.0125	.1971	.0635	.9496	-.3178	.3428

**Panel B: Direct Effect of Episodic Envy (EE) on Ethical Fading (EFQ)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	3.7527	.4236	8.8594	.0000	3.0426	4.4629
Predictor:						
<b>EE</b>	.1568	.1497	1.0470	.3003	-.0943	.4078
Covariate:						
<b>Gender</b>	-.1730	.2087	-.8290	.4111	-.5229	.1769

**Panel C: Direct Effect of Ethical Fading (EFQ) on Fraud (FCL5)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	-2.3589	1.1539	-2.0443	.0464	-4.2942	-.4235
Predictor:						
<b>EFQ</b>	.5614	.2413	2.3268	.0242	.1567	.9660
Covariate:						
<b>Gender</b>	.9955	.3549	2.805	.0072	.4002	1.5907

Model 6 Variables (N = 54):

- Y = FCL5 (Number of frauds in rounds 14 through 18)
- X = Group (High-pay group = 0, Low-pay group = 1)
- Mediator 1 = PU (Perceived unfairness)
- Mediator 2 = EE (Episodic Envy)
- Mediator 3 = EFQ (Ethical fading questions)
- Control 1 = Gender (0 = Female, 1 = Male)

**Table 10: Chapter 3 PROCESS Tests of *H3* & *H4* (Second Analysis, with *EFW*)**

**Panel A: Direct Effect of Episodic Envy (EE) on Ethical Fading (EFW)**

	<b>coeff</b>	<b>se</b>	<b><i>t</i></b>	<b><i>p</i></b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	.2984	.2970	1.0046	.3200	-.1996	.7964
Predictor:						
<b>EE</b>	-.0640	.1050	-.6091	.5453	-.2400	.1121
Covariate:						
<b>Gender</b>	.0130	.1463	.0887	.9297	-.2324	.2583

**Panel B: Direct Effect of Ethical Fading (EFW) on Fraud (FCL5)**

	<b>coeff</b>	<b>se</b>	<b><i>t</i></b>	<b><i>p</i></b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	-.2628	.7623	-.3448	.7318	-1.5413	1.0157
Predictor:						
<b>EFW</b>	.0356	.3629	.0982	.9222	-.5730	.6443
Covariate:						
<b>Gender</b>	.8979	.3718	2.4152	.0196	.2744	1.5214

Model 6 Variables ( <i>N</i> = 54):
-------------------------------------

*Y* = FCL5 (Number of frauds in rounds 14 through 18)

*X* = Group (High-pay group = 0, Low-pay group = 1)

*Mediator 1* = PU (Perceived unfairness)

*Mediator 2* = EE (Episodic envy)

*Mediator 3* = EFW (Ethical fading words)

*Control 1* = Gender (0 = Female, 1 = Male)

**Table 11: Chapter 3 PROCESS Tests of H5, H6, & H7 (Second Analysis, with EFQ)**

**Panel A: Indirect Effect of Pay Disparity on Fraud through Perceived Unfairness**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Perceived Unfairness (PU)	.2348	.2652	.0280	.8793

**Panel B: Indirect Effect of Pay Disparity on Fraud through Episodic Envy**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Episodic Envy (EE)	-.0412	.0998	-.3328	.0414

**Panel C: Indirect Effect of Pay Disparity on Fraud through Ethical Fading**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Ethical Fading (EFQ)	.2286	.1934	.0127	.6696

*LLCI = Lower-level confidence interval*  
*ULCI = Upper-level confidence interval*

Model 6 Variables (N = 54):
-----------------------------

- Y = FCL5 (Number of frauds in rounds 14 through 18)
- X = Group (High-pay group = 0, Low-pay group = 1)
- Mediator 1 = PU (Perceived unfairness)
- Mediator 2 = EE (Episodic envy)
- Mediator 3 = EFW (Ethical fading words)
- Control 1 = Gender (0 = Female, 1 = Male)



**Table 12: Chapter 3 PROCESS Tests of H5, H6, and H7 (Second Analysis, with EFW)**

**Panel A: Indirect Effect of Pay Disparity on Fraud through Perceived Unfairness**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Perceived Unfairness (PU)	.1550	.1845	-.0201	.5535

**Panel B: Indirect Effect of Pay Disparity on Fraud through Episodic Envy**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Episodic Envy (EE)	-.0205	.0975	-.2814	.0694

**Panel C: Indirect Effect of Pay Disparity on Fraud through Ethical Fading**

Mediator	Effect	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI
Ethical Fading (EFW)	-.0125	.1208	-.1840	.2182

*LLCI = Lower-level confidence interval*  
*ULCI = Upper-level confidence interval*

Model 6 Variables (N = 54):
-----------------------------

- Y = FCL5 (Number of frauds in rounds 14 through 18)
- X = Group (High-pay group = 0, Low-pay group = 1)
- Mediator 1 = PU (Perceived unfairness)
- Mediator 2 = EE (Episodic envy)
- Mediator 3 = EFW (Ethical fading words)
- Control 1 = Gender (0 = Female, 1 = Male)

**Table 13: Chapter 3 Moderating Effect of Risk Preference on Ethical Fading (EFQ)**

	<b>coeff</b>	<b>se</b>	<b><i>t</i></b>	<b><i>p</i></b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	5.8201	1.3868	4.1968	.0001	3.495	8.1451
Predictor(s):						
<b>RP</b>	-.6990	.3587	-1.9488	.0571	-1.3004	-.0977
<b>EE</b>	-1.1451	.6652	-1.7214	.0915	-2.2603	-.0298
<b>RP * EE</b>	.3419	.1790	1.9102	.0620	.0418	.6419
Covariate:						
<b>Gender</b>	-.1388	.2154	-.6446	.5222	-.5000	.2223

Model 1 Variables (N = 54):
-----------------------------

*Y* = EFQ (Ethical fading questions)

*X* = EE (Episodic envy)

*Moderator 1* = RP (Risk preference)

*Control 1* = Gender (0 = Female, 1 = Male)

**Table 14: Chapter 4 Descriptive Statistics (Experiment 1, First Analysis)**

	<b>Number</b>	<b>Percent</b>
<b>Gender</b>		
Female	23	33.8%
Male	45	66.2%
<b>Undergraduate Major</b>		
Accounting	11	16.2%
Business Administration	3	4.4%
Economics	4	5.9%
Entrepreneurial Management	1	1.5%
Finance	13	19.1%
General Business	7	10.3%
Global Business Management	2	2.9%
Marketing	4	5.9%
Non-business	12	17.6%
Supply-chain Management	10	14.7%
Unidentified	1	1.5%
<b>GPA</b>		
4.0 - 3.5	26	38.2%
3.4 - 3.0	30	44.1%
2.9 - 2.5	8	11.8%
2.4 - 2.0	4	5.9%
Below 2.0	0	0.0%
	<b>Mean</b>	<b>Standard Deviation</b>
<b>Number of Accounting Courses</b>	2.81	1.67
<i>N = 60</i>		

**Table 15: Chapter 4 ANCOVA Test of *H1* (Experiment 1, First Analysis)**

**Panel A: Descriptive Statistics (Dependent Variable: Egocentric Perceptions of Fairness)**

Group	Mean	Std. Deviation	N
Above Target	1.07	0.856	34
Below Target	0.68	0.878	34
Total	0.87	0.883	68

*Group = Performance through 24 rounds (Above Target = 0, Below Target = 1 )*

**Panel B: Tests of Between-Subjects Effects (Dependent Variable: Egocentric Perceptions of Fairness)**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	7.903	3	2.634	3.804	.014	.151
Intercept	31.271	1	31.271	45.151	.000	.414
Predictor:						
Group	0.303	1	0.303	0.437	.511	.007
Covariate:						
Aud0124	3.397	1	3.397	4.905	.030	.071
Gender	1.367	1	1.367	1.973	.165	.030
Error	44.325	64	0.841			
Total	104.000	68				
Corrected Total	52.229	67				

*R Squared = .151 (Adjusted R Squared = .112)*

*Gender = Gender (Female = 0, Male = 1)*

*Aud0124 = Number of times fined for misrepresentation through 24 rounds*

**Table 16: Chapter 4 PROCESS Tests of *H2*, *H3*, & *H4* (Experiment 1, First Analysis, with *EFW*)**

**Panel A: Direct Effect of Egocentric Perceptions of Fairness (EPF) on Negative Affect (NA)**

	<b>coeff</b>	<b>se</b>	<b><i>t</i></b>	<b><i>p</i></b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	1.2512	.2054	6.0918	.0000	.9083	1.5941
Predictor:						
<b>EPF</b>	.033	.1017	.3249	.7464	-.1367	.2028
Covariate:						
<b>Aud0124</b>	-.0223	.201	-.1109	.9121	-.3256	.3133
<b>Gender</b>	-.0284	.178	-.1597	.8736	-.3256	.2687

**Panel B: Direct Effect of Negative Affect (NA) on Ethical Fading (EFW)**

	<b>coeff</b>	<b>se</b>	<b><i>t</i></b>	<b><i>p</i></b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	.4532	.2333	1.9421	.0567	.0635	.8428
Predictor:						
<b>NA</b>	-.1429	.1135	-1.2585	.2129	-.3325	.0467
Covariate:						
<b>Aud0124</b>	-.2194	.1812	-1.211	.2305	-.5220	.0831
<b>Gender</b>	-.0683	.1604	-.4254	.6720	-.3361	.1996

**Panel C: Direct Effect of Ethical Fading (EFW) on Fraud (FLR)**

	<b>coeff</b>	<b>se</b>	<b><i>z</i></b>	<b><i>p</i></b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	-1.5352	1.1363	-1.351	.1767	-3.4043	.3339
Predictor:						
<b>EFW</b>	-1.4409	1.0175	-1.4161	.1568	-3.1146	.2328
Covariate:						
<b>Aud0124</b>	-.2832	.8074	-.3508	.7258	-1.6112	1.0448
<b>Gender</b>	-1.4705	.8341	-1.763	.0779	-2.8425	-.0986

Model 6 Variables ( <i>N</i> = 68):
-------------------------------------

*Y* = *FLR* (0 = no fraud in last round, 1 = fraud in last round)

*X* = *Group* (Above target group = 0, Below target group = 1)

*Mediator 1* = *EPF* (Egocentric Perceptions of Fairness)

*Mediator 2* = *NA* (Negative Affect)

*Mediator 3* = *EFW* (Ethical Fading Words)

*Control 1* = *Aud0124* (Number of times fined for misrepresentation through 24 rounds)

*Control 2* = *Gender* (0 = Female, 1 = Male)

**Table 17: Chapter 4 PROCESS Tests of H3 & H4 (Experiment 1, First Analysis, with EFQ)**

**Panel A: Direct Effect of Negative Affect (NA) on Ethical Fading (EFQ)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	3.9183	.3062	12.7966	.0000	3.407	4.4296
Predictor:						
<b>NA</b>	-.0268	.149	-.1796	.8580	-.2756	.2220
Covariate:						
<b>Aud0124</b>	-.1289	.2378	-.5419	.5898	-.5259	.2682
<b>Gender</b>	-.0138	.2105	-.0656	.9479	-.3654	.3378

**Panel B: Direct Effect of Ethical Fading (EFQ) on Fraud (FLR)**

	<b>coeff</b>	<b>se</b>	<b>z</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	.0888	2.2148	.0401	.9680	-3.5543	3.7319
Predictor:						
<b>EFQ</b>	-.5360	.4857	-1.1036	.2698	-1.335	.2629
Covariate:						
<b>Aud0124</b>	-.1209	.7845	-.1542	.8775	-1.4113	1.1694
<b>Gender</b>	-1.2582	.7998	-1.5731	.1157	-2.5737	.0574

Model 6 Variables (N = 68):
-----------------------------

$Y = FLR$  (0 = no fraud in last round, 1 = fraud in last round)

$X = Group$  (Above target group = 0, Below target group = 1)

*Mediator 1* = *EPF* (Egocentric Perceptions of Fairness)

*Mediator 2* = *NA* (Negative Affect)

*Mediator 3* = *EFQ* (Ethical Fading Questions)

*Control 1* = *Aud0124* (Number of times fined for misrepresentation through 24 rounds)

*Control 2* = *Gender* (0 = Female, 1 = Male)

**Table 18: Table 18: Chapter 4 Pearson Chi-square Test of  $H_5$  (Experiment 1, First Analysis)**

**Group \* Fraud Last Round Cross-tabulation**

			Fraud Last Round		Total
			0	1	
Group	Above Target	Count	32	2	34
		Expected Count	29.0	5.0	34.0
		% within Group	94.1%	5.9%	100.0%
		% within Fraud Last Round	55.2%	20.0%	50.0%
		% of Total	47.1%	2.9%	50.0%
		Std. Residual	.6	-1.3	
		Below Target	Count	26	8
	Expected Count	29.0	5.0	34.0	
	% within Group	76.5%	23.5%	100.0%	
	% within Fraud Last Round	44.8%	80.0%	50.0%	
	% of Total	38.2%	11.8%	50.0%	
	Std. Residual	-.6	1.3		
Total		Count	58	10	68
		Expected Count	58.0	10.0	68.0
		% within Group	85.3%	14.7%	100.0%
		% within Fraud Last Round	100.0%	100.0%	100.0%
		% of Total	85.3%	14.7%	100.0%

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.221 <sup>a</sup>	1	.040		
Continuity Correction <sup>b</sup>	2.931	1	.087		
Likelihood Ratio	4.477	1	.034		
Fisher's Exact Test				.083	.042
Linear-by-Linear Association	4.159	1	.041		
N of Valid Cases	68				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.00.

b. Computed only for a 2x2 table

**Table 19: Chapter 4 Descriptive Statistics (Experiment 1, Second Analysis)**

	<b>Number</b>	<b>Percent</b>
<b>Gender</b>		
Female	23	38.3%
Male	37	61.7%
<b>Undergraduate Major</b>		
Business Administration	3	5.0%
Economics	4	6.7%
Entrepreneurial Management	3	5.0%
Finance	13	21.7%
General Business	9	15.0%
Global Business Management	2	3.3%
Marketing	3	5.0%
Non-business	12	20.0%
Supply-chain Management	10	16.7%
Unidentified	1	1.7%
<b>GPA</b>		
4.0 - 3.5	23	38.3%
3.4 - 3.0	23	38.3%
2.9 - 2.5	9	15.0%
2.4 - 2.0	5	8.3%
Below 2.0	0	0.0%
	<b>Mean</b>	<b>Standard Deviation</b>
<b>Number of Accounting Courses</b>	2.37	1.2
<i>N = 60</i>		



**Table 20: Chapter 4 ANCOVA Test of *HI* (Experiment 1, Second Analysis)**

**Panel A: Descriptive Statistics (Dependent Variable: Perceived Unfairness)**

Group	Mean	Std. Deviation	N
Above Target	1.01	0.795	30
Below Target	0.51	1.082	30
Total	0.76	0.974	60

*Group = Performance through 24 rounds (Above Target = 0, Below Target = 1 )*

**Panel B: Tests of Between-Subjects Effects (Dependent Variable: Perceived Unfairness)**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	8.933	3	2.978	3.541	.020	.159
Intercept	21.774	1	21.774	25.895	.000	.316
Predictor:						
Group	0.336	1	0.336	0.399	.530	.007
Covariate:						
Aud0124	4.773	1	4.773	5.676	.021	.092
Gender	0.376	1	0.376	0.447	.507	.008
Error	47.087	56	0.841			
Total	90.778	60				
Corrected Total	56.020	59				

*R Squared = .159 (Adjusted R Squared = .114)*

*Gender = Gender (Female = 0, Male = 1)*

*Aud0124 = Number of times fined for misrepresentation through 24 rounds*

**Table 21: Chapter 4 PROCESS Tests of H2, H3, & H4 (Experiment 1, Second Analysis, with EFW)**

**Panel A: Direct Effect of Egocentric Perceptions of Fairness (EPF) on Negative Affect (NA)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	1.2177	.2050	5.9397	.0000	.8747	1.5607
Predictor:						
<b>EPF</b>	.1226	.1001	1.2250	.2258	-.0449	.2901
Covariate:						
<b>Aud0124</b>	-.0814	.2053	-.3967	.6931	-.4249	.2620
<b>Gender</b>	-.0669	.1833	-.3649	.7166	-.3735	.2397

**Panel B: Direct Effect of Negative Affect (NA) on Ethical Fading (EFW)**

	<b>coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	.5262	.2408	2.1852	.0332	.1232	.9293
Predictor:						
<b>NA</b>	-.1962	.1236	-1.5871	.1183	-.4031	.0107
Covariate:						
<b>Aud0124</b>	-.1785	.1885	-.9468	.3480	-.4939	.1370
<b>Gender</b>	-.0916	.1682	-.5443	.5885	-.3731	.1900

**Panel C: Direct Effect of Ethical Fading (EFW) on Fraud (FLR)**

	<b>coeff</b>	<b>se</b>	<b>z</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	-.8153	1.4147	-.5763	.5644	-3.1423	1.5117
Predictor:						
<b>EFW</b>	-1.5425	.9044	-1.7056	.0881	-3.0300	-.0550
Covariate:						
<b>Aud0124</b>	-2.074	1.1188	-1.8538	.0638	-3.9142	-.2338
<b>Gender</b>	-1.6607	.9468	-1.754	.0794	-3.218	-.1034

Model 6 Variables (N = 60):

- $Y =$  *FLR* (0 = no fraud in last round, 1 = fraud in last round)
- $X =$  *Group* (Above target group = 0, Below target group = 1)
- Mediator 1* = *EPF* (Egocentric Perceptions of Fairness)
- Mediator 2* = *NA* (Negative Affect)
- Mediator 3* = *EFW* (Ethical Fading Words)
- Control 1* = *Aud0124* (Number of times fined for misrepresentation through 24 rounds)
- Control 2* = *Gender* (0 = Female, 1 = Male)

**Table 22: Chapter 4 PROCESS Tests of *H3* & *H4* (Experiment 1, Second Analysis, with *EFQ*)**

**Panel A: Direct Effect of Negative Affect (NA) on Ethical Fading (EFQ)**

	<b>coeff</b>	<b>se</b>	<b><i>t</i></b>	<b><i>p</i></b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	4.1799	.3082	13.5637	.0000	3.6641	4.6956
Predictor:						
<b>NA</b>	-.2180	.1582	-1.3779	.1739	-.4827	.0468
Covariate:						
<b>Aud0124</b>	-.4071	.2412	-1.6876	.0973	-.8108	-.0034
<b>Gender</b>	-.1158	.2153	-.5381	.5927	-.4761	.2444

**Panel B: Direct Effect of Ethical Fading (EFQ) on Fraud (FLR)**

	<b>coeff</b>	<b>se</b>	<b><i>z</i></b>	<b><i>p</i></b>	<b>LLCI</b>	<b>ULCI</b>
<b>(constant)</b>	-.2778	2.7402	-.1014	.9193	-4.7849	4.2294
Predictor:						
<b>EFQ</b>	-.3042	.5493	-.5539	.5797	-1.2077	.5992
Covariate:						
<b>Aud0124</b>	-1.6242	.9939	-1.6341	.1022	-3.2590	.0107
<b>Gender</b>	-1.3804	.8690	-1.5885	.1122	-2.8098	.0489

Model 6 Variables (*N* = 60):

*Y* = *FLR* (0 = no fraud in last round, 1 = fraud in last round)

*X* = *Group* (Above target group = 0, Below target group = 1)

*Mediator 1* = *EPF* (Egocentric Perceptions of Fairness)

*Mediator 2* = *NA* (Negative Affect)

*Mediator 3* = *EFQ* (Ethical Fading Questions)

*Control 1* = *Aud0124* (Number of times fined for misrepresentation through 24 rounds)

*Control 2* = *Gender* (0 = Female, 1 = Male)

**Table 23: Chapter 4 Pearson Chi-square Test of  $H_5$  (Experiment 1, Second Analysis)**

**Group \* Fraud Last Round Cross-tabulation**

			Fraud Last Round		Total
			0	1	
Group	Above Target	Count	29 <sub>a</sub>	1 <sub>b</sub>	30
		Expected Count	25.0	5.0	30.0
		% within Group	96.7%	3.3%	100.0%
		% within Fraud Last Round	58.0%	10.0%	50.0%
		% of Total	48.3%	1.7%	50.0%
		Std. Residual	.8	-1.8	
		Below Target	Count	Count	21 <sub>a</sub>
Expected Count	25.0			5.0	30.0
% within Group	70.0%			30.0%	100.0%
% within Fraud Last Round	42.0%			90.0%	50.0%
% of Total	35.0%			15.0%	50.0%
Std. Residual	-.8			1.8	
Total	Count			Count	50
		Expected Count	50.0	10.0	60.0
		% within Group	83.3%	16.7%	100.0%
		% within Fraud Last Round	100.0%	100.0%	100.0%
		% of Total	83.3%	16.7%	100.0%

Each subscript letter denotes a subset of Fraud Last Round categories whose column proportions do not differ significantly from each other at the .05 level.

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.680 <sup>a</sup>	1	.006		
Continuity Correction <sup>b</sup>	5.880	1	.015		
Likelihood Ratio	8.647	1	.003		
Fisher's Exact Test				.012	.006
Linear-by-Linear Association	7.552	1	.006		
N of Valid Cases	60				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.00.

b. Computed only for a 2x2 table

**Table 24: Chapter 4 Descriptive Statistics (Experiment 2)**

	<b>Number</b>	<b>Percent</b>
<b>Gender</b>		
Female	31	49.2%
Male	32	50.8%
<b>Undergraduate Major</b>		
Business Administration	2	3.2%
Economics	1	1.6%
Entrepreneurial Management	1	1.6%
Finance	7	11.1%
General Business	5	7.9%
Global Business Management	6	9.5%
Marketing	14	22.2%
Non-business	11	17.5%
Supply-chain Management	16	25.4%
Unidentified	0	0.0%
<b>GPA</b>		
4.0 - 3.5	13	20.6.3%
3.4 - 3.0	38	60.3.%
2.9 - 2.5	11	17.5%
2.4 - 2.0	1	1.6%
Below 2.0	0	0.0%
	<b>Mean</b>	<b>Standard Deviation</b>
<b>Number of Accounting Courses</b>	2.19	1.0
<i>N = 60</i>		

**Table 25: Chapter 4 Pearson Chi-square Test of  $H_6$  (Experiment 2)**

**Group \* Fraud Cross-tabulation**

			Fraud		Total
			0	1	
Group	Reached Goal	Count	18 <sub>a</sub>	3 <sub>a</sub>	21
		Expected Count	16.0	5.0	21.0
		% within Group	85.7%	14.3%	100.0%
		% within Fraud	37.5%	20.0%	33.3%
		% of Total	28.6%	4.8%	33.3%
		Std. Residual	.5	-.9	
	Far from Goal	Count	18 <sub>a</sub>	3 <sub>a</sub>	21
		Expected Count	16.0	5.0	21.0
		% within Group	85.7%	14.3%	100.0%
		% within Fraud	37.5%	20.0%	33.3%
		% of Total	28.6%	4.8%	33.3%
		Std. Residual	.5	-.9	
	Close to Goal	Count	12 <sub>a</sub>	9 <sub>b</sub>	21
		Expected Count	16.0	5.0	21.0
		% within Group	57.1%	42.9%	100.0%
		% within Fraud	25.0%	60.0%	33.3%
		% of Total	19.0%	14.3%	33.3%
		Std. Residual	-1.0	1.8	
Total	Count	48	15	63	
	Expected Count	48.0	15.0	63.0	
	% within Group	76.2%	23.8%	100.0%	
	% within Fraud	100.0%	100.0%	100.0%	
	% of Total	76.2%	23.8%	100.0%	

Each subscript letter denotes a subset of Fraud categories whose column proportions do not differ significantly from each other at the .05 level.

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.300 <sup>a</sup>	2	.043
Likelihood Ratio	6.026	2	.049
Linear-by-Linear Association	4.650	1	.031
N of Valid Cases	63		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.00.

## **APPENDIX C: CHAPTER 3 TASK INSTRUCTIONS**

Your task is to sell assets in an online marketplace. You will earn Credits for each successful sale, which will be translated into US dollars and paid to you upon completion of the study.

Before starting this task, please read these important instructions:

If you have any questions throughout the following instructions, then please raise your hand. The tasks that you will be asked to do require you to think, be attentive, and have a clear understanding of the instructions.

1. If you have any questions throughout the following instructions, then please raise your hand. The tasks that you will be asked to do require you to think, be attentive, and have a clear understanding of the instructions.
2. For each of 25 rounds, you will be given information regarding an asset's name, quality, and value-range. For example, you may be provided with an "*Epsilon*" asset of average quality that is valued between 400 to 500 Credits. **Please note that estimating the value of these assets is highly subjective. Thus, some assets may be valued incorrectly.**
3. Your task, for each round, is to sell the asset in an online marketplace. Before attempting to sell each asset, however, you must determine both the price of the asset and how to disclose its quality. If you think the value of the asset is incorrect, then it is possible to select another quality level. This will also adjust the price level on-screen. For example, if you rate an Epsilon asset at average quality, then it will have an assessed value between 400 to 500 Credits. However, selecting a rating of "above average" automatically moves the value-range to 450



to 550 Credits. Finally, you must determine a price, within the value-range, at which to sell the asset (e.g., 550 Credits). Please note that the other participants do not have access to any information regarding the pricing and disclosure of quality decisions you make for any asset.

4. You will then enter the marketplace to sell your asset. **Please note that your offer may be declined.**
5. You can earn more Credits by selling assets that have higher values.
6. The possibility of an audit exists after each transaction. **Misrepresenting the quality of the asset can result in a fine of 1,000 Credits if an audit (1) is conducted and (2) reveals that the asset was improperly disclosed at a level higher than initially provided.** In addition, you will forfeit any Credits earned from the transaction. The success rate of detecting a misrepresentation can be anywhere from 20 to 80 percent if an audit does occur.
7. **Before you begin the task of selling assets, you will be asked a question wherein your answer may determine your rate of pay for the study.**
8. After the 13th round, you will be updated regarding your Credit earnings so far. In addition, you will be asked to complete a brief survey. Further instructions will be provided for that survey later in the study.
9. You will be asked to complete a brief word completion exercise at the end of the last round (25th) of selling assets. You may earn additional Credits during this task. Further instructions will be provided later in the study.

10. After the word completion task, you will be prompted that the study is over and that you should please bring the card located at your station to the administrator so you may be paid. The study administrator will translate your Credits earned from selling assets and the word completion task into US Dollars. The exchange rate between US Dollars and Credits is positive. Any negative Credit balance will be rounded to zero. In addition to the money earned from selling assets and the word completion task, you will be paid a fee for participating in the study.

**APPENDIX D: CHAPTER 3 ZODIAC AND PERSONALITY SURVEY**

After 13 rounds, you are in the **top (bottom)** tier of earners.

The following survey includes a variety of questions that ask about your personality, preferences, emotions, and zodiac. Answering these questions accurately requires proper reflection on how you really think, feel, and act in general. Please answer each question as best as you can. The Zodiac is made up of 12 different sun signs. Your date of birth determines which one you are. Previous research has shown that people's zodiac sign is related to the type of judgments they make. Please indicate your Zodiac sign below and then answer the personality questionnaire.<sup>26</sup>

What is your zodiac sign?

- **Aries** (March 21 to April 19)
- **Taurus** (April 20 to May 20)
- **Gemini** (May 21 to June 20)
- **Cancer** (June 21 to July 22)
- **Leo** (July 23 to August 22)
- **Virgo** (August 23 to September 22)
- **Libra** (September 23 to October 22)
- **Scorpio** (October 23 to November 21)
- **Sagittarius** (November 22 to December 21)
- **Capricorn** (December 22 to January 19)
- **Aquarius** (January 20 to February 18)
- **Pisces** (February 19 to March 20)

---

<sup>26</sup> The wording of these instructions is taken from Gino and Pierce (2009, p., 147).

Please indicate your level of agreement with the following statements<sup>27</sup>:

1. I am usually talkative.
2. I feel envious now.
3. I tend to find fault with others.
4. Anyone would agree that the people in the higher tier of earnings had an advantage that was unfairly obtained.
5. I usually do a thorough job.
6. I am frequently depressed.
7. The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily business decisions.
8. An objective judge who knows the facts would agree that the people in the higher tier of earnings do not deserve those earnings.
9. I am usually reserved.
10. I am helpful and unselfish with others.
11. I can be somewhat careless at times.
12. I feel bitter now.
13. The people in the higher tier of earnings achieved their advantage through unjust actions or unjust procedures.
14. I lack some things others here have.
15. I handle stress well.

---

<sup>27</sup> The items were rated on the degree to which the participant agrees or disagrees with the situation, with the scale ranging from 1 (strongly disagree) to 5 (strongly agree).

16. I am generally a curious person.
17. I am full of energy.
18. The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily economic decisions.
19. I am irritated now.
20. I am a reliable worker.
21. I can be tense at times.
22. Others here have more things going better for him/her than I do.
23. I generate a lot of enthusiasm.
24. I have a forgiving nature.
25. The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily business decisions.
26. I worry a lot.
27. I feel resentful now.
28. I feel resentment toward those here who have more than I do.
29. I enjoy taking risks.
30. An objective judge who knows the facts would agree that the people in the higher tier of earnings are there mostly due to luck.

## **APPENDIX E: WORD COMPLETION TASK**

Complete the following word fragments using the first real word (i.e., a word that can be found in the dictionary) that comes to your mind. There is no one correct answer for each fragment. For example, if given the fragment “**B A \_ \_**,” you can complete it using any of the words “**base**,” “**baby**,” or “**ball**” (note that capital letters can be used, but they are not necessary).

You will earn an additional 250 Credits for each completed word fragment. You will have 45 seconds to finish each fragment.

1. “M O \_ \_ \_”
2. “V I \_ \_ \_ \_”
3. “E T \_ \_ \_ \_ \_”
4. “H O \_ \_ \_ \_ \_”
5. “T R \_ \_ \_”
6. “R A \_ \_ \_”
7. “C H \_ \_ \_ \_ \_”
8. “B I \_ \_ \_”



## **APPENDIX F: DEMOGRAPHICS QUESTIONNAIRE**

## Instructions

Please complete the following questions below.

1. Your gender:
  - Male
  - Female
2. Your undergraduate major:
3. Your GPA at the start of the current semester (round if necessary):
  - 4.0- 3.5
  - 3.4- 3.0
  - 2.9 - 2.5
  - 2.4 - 2.0
  - Below 2.0
4. How many accounting-related courses you have taken (include the current semester):

**APPENDIX G: CHAPTER 4 TASK INSTRUCTIONS**

## Instructions for Seller Task

Your task is to sell assets in an online marketplace. You will earn Credits for each successful sale, which will be translated into US dollars and paid to you upon completion of the study.

Before starting this task, please read these important instructions:

---

1. If you have any questions throughout the following instructions, then please raise your hand. The tasks that you will be asked to do require you to think, be attentive, and have a clear understanding of the instructions.
2. For each of 25 rounds, you will be given information regarding an asset's name, quality, and value-range. For example, you may be provided with an "*Epsilon*" asset of average quality that is valued between 400 to 500 Credits. **Please note that estimating the value of these assets is highly subjective. Thus, some assets may be valued incorrectly.**
3. Your task, for each round, is to sell the asset in an online marketplace. Before attempting to sell each asset, however, you must determine both the price of the asset and how to disclose its quality. If you think the value of the asset is incorrect, then it is possible to select another quality level. This will also adjust the price level on-screen. For example, if you rate an Epsilon asset at average quality, then it will have an assessed value between 400 to 500 Credits. However, selecting a rating of "above average" automatically moves the value-range to 450 to 550 Credits. Finally, you must determine a price, within the value-range, at which to sell the asset (e.g., 550 Credits). Please note that the other participants do not have access to any information regarding the pricing and disclosure of quality decisions you make for any asset.

4. You will then enter the marketplace to sell your asset. **Please note that your offer may be declined.**
5. You can earn more Credits by selling assets that have higher values.
6. The possibility of an audit exists after each transaction. **Misrepresenting the quality of the asset can result in a fine of 2,000 Credits if an audit (1) is conducted and (2) reveals that the asset was improperly disclosed at a level higher than initially provided.** In addition, you will forfeit any Credits earned from the transaction. The success rate of detecting a misrepresentation can be anywhere from 20 to 80 percent if an audit does occur.
7. In addition to the money earned from the sale of assets, **you may be awarded a 3,000-Credit bonus if you reach a certain number of earned Credits.** This number is believed to be reasonable and has been derived so that most individuals are awarded the bonus. The number of earned-Credits required to receive the bonus will be provided during the experiment.
8. After the 24th round, you will be updated regarding your progress toward receiving the bonus. In addition, you will be asked to complete a brief survey. Further instructions will be provided for that survey later in the study.
9. You will be asked to complete a brief word completion exercise at the end of the last round (25th) of selling assets. You may earn additional Credits during this task. Further instructions will be provided later in the study.
10. After the word completion task, you will be prompted that the study is over and that you should please bring the card located at your station to the administrator so you may be

paid. The study administrator will translate your Credits earned from selling assets and the word completion task into US Dollars. The exchange rate between US Dollars and Credits is positive. Any negative Credit balance will be rounded to zero. In addition to the money earned from selling assets and the word completion task, you will be paid a fee for participating in the study.

**APPENDIX H: CHAPTER 4 ZODIAC AND PERSONALITY SURVEY**

The following survey includes a variety of questions that ask about your personality, preferences, emotions, and zodiac. Answering these questions accurately requires proper reflection on how you really think, feel, and act in general. Please answer each question as best as you can. The Zodiac is made up of 12 different sun signs. Your date of birth determines which one you are. Previous research has shown that people's zodiac sign is related to the type of judgments they make. Please indicate your Zodiac sign below and then answer the personality questionnaire.<sup>28</sup>

1. What is your zodiac sign?

- **Aries** (March 21 to April 19)
- **Taurus** (April 20 to May 20)
- **Gemini** (May 21 to June 20)
- **Cancer** (June 21 to July 22)
- **Leo** (July 23 to August 22)
- **Virgo** (August 23 to September 22)
- **Libra** (September 23 to October 22)
- **Scorpio** (October 23 to November 21)
- **Sagittarius** (November 22 to December 21)
- **Capricorn** (December 22 to January 19)
- **Aquarius** (January 20 to February 18)
- **Pisces** (February 19 to March 20)

Please indicate your level of agreement with the following statements:

---

<sup>28</sup> The wording of these instructions is taken from Gino and Pierce (2009, p., 147).



		Very Unfair	Somewhat Unfair	Neither Unfair or Fair	Somewhat fair	Very fair
1.	Overall, I would rate the fairness of my actions in the marketplace as...	1	2	3	4	5
2.	Overall, I would rate the fairness of other's actions in the marketplace as...	1	2	3	4	5
		Very Untrustworthy	Somewhat Untrustworthy	Neither Untrustworthy or Trustworthy	Somewhat Trustworthy	Very Trustworthy
3.	Overall, I would rate the trustworthiness of my actions in the marketplace as...	1	2	3	4	5
4.	Overall, I would rate the trustworthiness of other's actions in the marketplace as...	1	2	3	4	5
		Very Dishonest	Somewhat Dishonest	Neither Honest of Dishonest	Somewhat Honest	Very Honest
5.	Overall, I would rate the honesty of my actions in the marketplace as...	1	2	3	4	5
6.	Overall, I would rate the honesty of other's actions in the marketplace as...	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Neither Disagree or Agree	Somewhat Agree	Strongly Disagree
7.	I am usually talkative.	1	2	3	4	5
8.	Because of my performance, I feel angry now.	1	2	3	4	5
9.	Because of my performance, I feel frustrated now.	1	2	3	4	5
10.	I tend to find fault with others.	1	2	3	4	5
11.	I usually do a thorough job.	1	2	3	4	5
12.	Because of my performance, I feel guilt now.	1	2	3	4	5
13.	I usually come up with new ideas.	1	2	3	4	5
14.	Because of my performance, I feel shame now	1	2	3	4	5
15.	The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily financial decisions.	1	2	3	4	5
16.	I am helpful and unselfish with others.	1	2	3	4	5
17.	I can be somewhat careless at times.	1	2	3	4	5
18.	Because of my performance, I feel sad now.	1	2	3	4	5
19.	Because of my performance, I feel disappointed now.	1	2	3	4	5
20.	Because of my performance, I feel depressed now.	1	2	3	4	5
21.	I handle stress well.	1	2	3	4	5
22.	I am generally a curious person.	1	2	3	4	5

		Strongly Disagree	Somewhat Disagree	Neither Disagree or Agree	Somewhat Agree	Strongly Disagree
23.	I am full of energy.	1	2	3	4	5
24.	The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily economic decisions.	1	2	3	4	5
25.	Because of my performance, I feel worried now.	1	2	3	4	5
26.	I am a reliable worker.	1	2	3	4	5
27.	I can be tense at times.	1	2	3	4	5
28.	Because of my performance, I feel uncomfortable now.	1	2	3	4	5
29.	Because of my performance, I feel fearful now.	1	2	3	4	5
30.	The decisions regarding how to represent the quality of the assets and determine their price in this task are primarily business decisions.	1	2	3	4	5

**APPENDIX I: IRB APPROVAL LETTER**



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Andrew T. Dill**

Date: **March 23, 2015**

Dear Researcher:

On 3/23/2015, the IRB approved the following human participant research until 03/22/2016 inclusive:

Type of Review: UCF Initial Review Submission Form  
Project Title: The influence of systematic and predictable psychological processes on an individual's decision-framing and decision-making in an asset-selling task.  
Investigator: Andrew T Dill  
IRB Number: SBE-15-11074  
Funding Agency: Institute of Management Accountants- Foundation for Applied Research(IMA )  
Grant Title:  
Research ID: N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu>.

If continuing review approval is not granted before the expiration date of 03/22/2016, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form(s).

All data, including signed consent forms if applicable, must be retained and secured per protocol for a minimum of five years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained and secured per protocol. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

*Joanne Muratori*

Signature applied by Joanne Muratori on 03/23/2015 04:59:09 PM EDT

IRB manager